

SONY®



Sony Broadcast General Catalogue 1986

NTSC/PAL/SECAM/PAL-M

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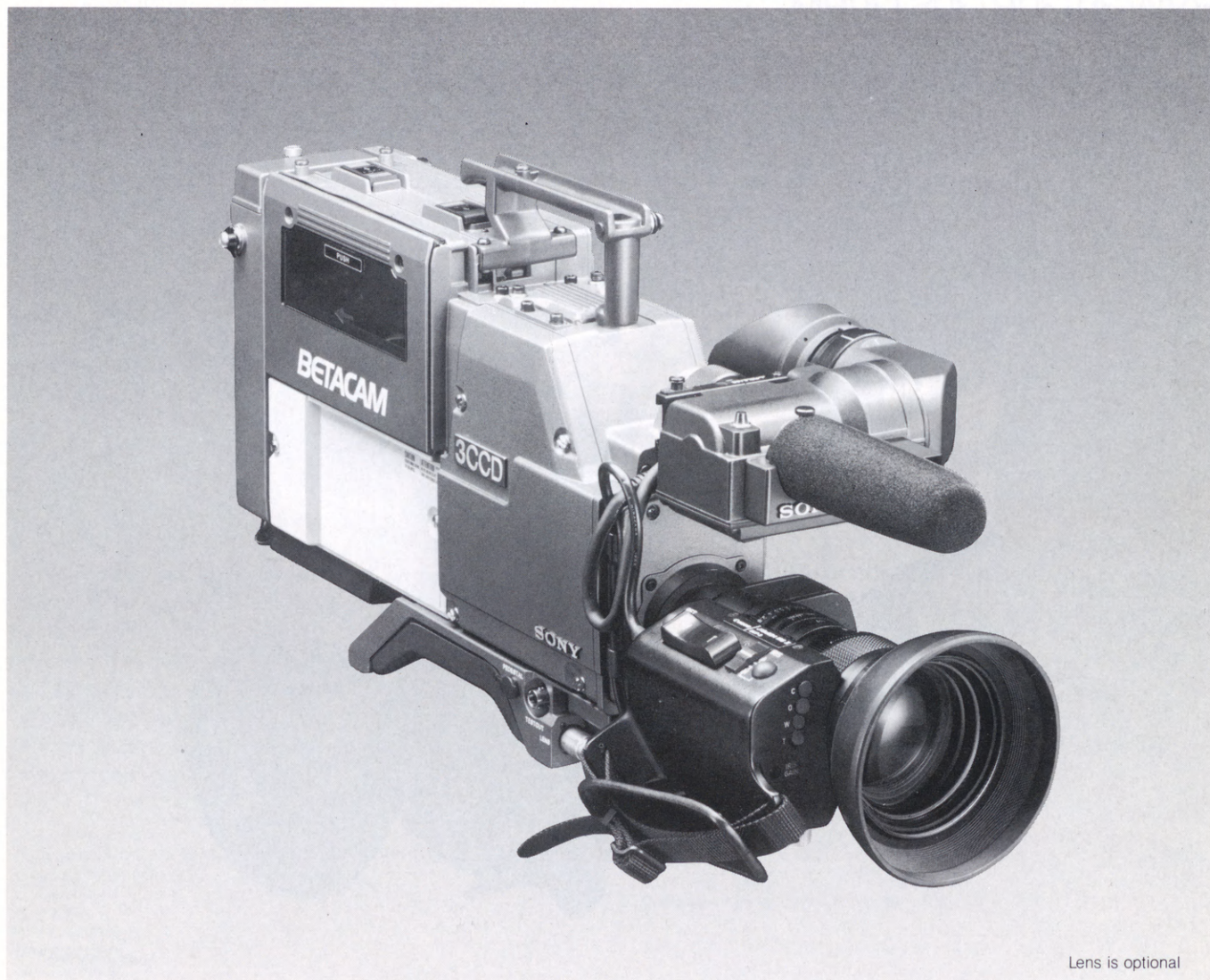
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Betacam Recorder with 3-chip CCD Camera

BVW-105/105P

(NTSC) (PAL)



Lens is optional

BVW-105 Betacam Recorder with 3-chip CCD Camera

- High quality CCD pick up device camera with Betacam*
 - High sensitivity: F5.6 (NTSC) and F5.0 (PAL)
 - Minimal lag and high resistance to image burn in
 - Impervious to vibration and shock
 - Minimum effects from electric/magnetic fields
 - Free from registration adjustment
- Compact and lightweight VTR camera combo provides ideal ENG operation.
- Dynamic Contrast Control ensures wide dynamic range
- Automatic iris control
- Automatic white/black balance
- 2H image enhancement
- Viewfinder indications for warning/confirmation
- Newly designed 1.5" viewfinder with horizontal slide mechanism

Supplied accessories

- Carrying case and belt
- Tripod mount attachment
- Rain cover
- Extension boards
- Board extender
- Shoulder strap
- Operation and maintenance manual (BVP-5 and BVV-1A)

Betacam Recorder with 3-tube Camera

BVW-3A/3AP/3AS/3APM

BVW-30/30P/30S/30PM

(NTSC)

(PAL)

(SECAM)

(PAL-M)



Lens is optional

BVW-3A/30 Betacam Recorder with Three-tube Camera

- 3-tube, $\frac{2}{3}$ -inch MS "SATICON" (BVW-3A), $\frac{2}{3}$ -inch MS Plumbicon™ (BVW-30)
- High sensitivity, F4.0 at 2000 lux (BVW-3A)
F4.5 at 2000 lux (BVW-30)
- Time code genlock capability
- High resolution of 650 TV lines at center
—also improved corner resolution
- Unique auto centering without using test chart
- Auto white balance with 3-position memory
- Accepts 2 types of lens connectors—12-pin or 6-pin
- Various automatic functions

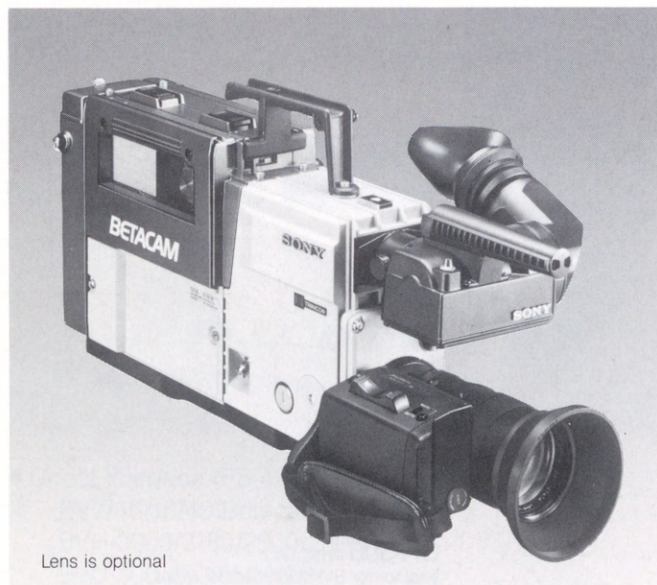
Supplied accessories (BVW-3A/30 series)

- Carrying case (LC-301) and belt
- Tripod mount attachment
- Rain cover
- Extension boards
- Board extender
- VTR bracket
- Shoulder strap
- Operation and maintenance manual

Betacam Recorder with Single-tube Camera

BVW-1/1P/1S

(NTSC) (PAL) (SECAM)



Lens is optional

BVW-1 Betacam with Single-tube Camera

- Single tube, HBST (High Band SMF Trinicon)
- Compact and lightweight
- Low power consumption (only 22W)
- Cableless packaging
- 45 minutes continuous operation with NP-1 battery
- Auto white balance with 3-position memory
- Automatic pick-up tube protection shutter

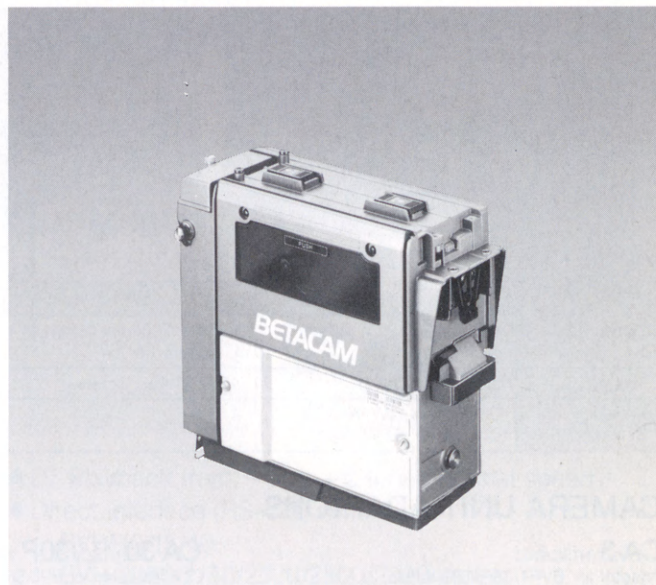
Supplied accessories

Carrying case (LC-101) and belt
Tripod mount attachment
Shoulder pad
Rain cover
Extension boards
Board extender
Shoulder strap
Operation and maintenance manual

Betacam Recorder Unit

BVV-1A/1APS

(NTSC/PAL-M) (PAL/SECAM)



BVV-1A/1APS Betacam Recorder Unit

- Time code genlock capability
- Various warning indicators
- Rec-run/Free run time code mode
- Automatic back space edit provided
- Built-in monitor loud speaker
- Audio level adjustment selectable (Auto/Manual)

Supplied accessories

Shoulder strap
Battery compartment lid strap
Screws
50-pin cap
Operation and maintenance manual

Betacam

- Betacam Format: Compressed time division multiplex recording system
- Very lightweight and small packaging:
 - Single tube configuration BVW-1 7.0 kg (15.4 lb)*
 - Three tube configuration BVW-3A/30 8.6 kg (19 lb)*
 - 3 chip CCD configuration BVW-105 7.5 kg (16.5 lb)*
- Uses 1/2-inch HG or BCT series Betacam videocassettes
- 30 minutes (NTSC/PAL-M), 36 minutes (PAL/SECAM) recording time using BCT-30K tape
- Separable camera and VTR units
 - as an independent camera or recorder with interconnecting interface
- Separate time code track and built-in time code generator
- Viewfinder indications for easy and confident operation
- Built-in unidirectional high sensitivity microphone

* includes VF, NP-1 battery, HG-20 or BCT-20K tape

RECORDER UNIT ADAPTORS

VA-1V(NTSC)/**1VP**(PAL)/**1VS**(SECAM)
Component/Composite Adaptor



VA-1(NTSC/PAL/SECAM/PAL-M)
Component Adaptor

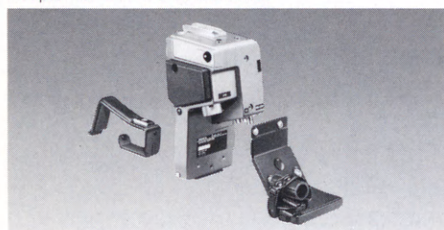


VA SERIES SPECIFICATIONS

	VA-1V/1VP/1VS	VA-1
Dimensions	90(W) × 200(H) × 100mm(D) (3.5 × 8 × 3.9")	90(W) × 200(H) × 46mm(D) (3.5 × 8 × 1.8")
Weight	1.3 kg (2 lb 14 oz)	470 g (1 lb)
Power consumption	Component: 3W (max.) Composite: 8.5W (max.)	1.08W

CAMERA UNIT ADAPTORS

CA-3(NTSC/PAL)
Adaptor for BVP-1/3A/5/30 series



CA-30(NTSC)/**30P**(PAL)
CCU Adaptor for BVP-3A/30



CA-300(NTSC/PAL)
Adaptor for BVP-250/300/330 series

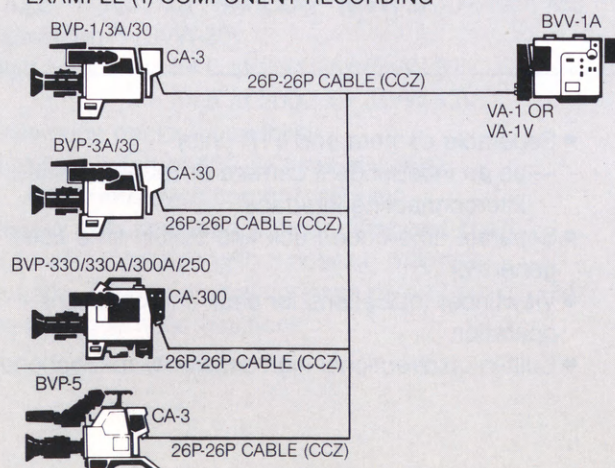


CA SERIES SPECIFICATIONS

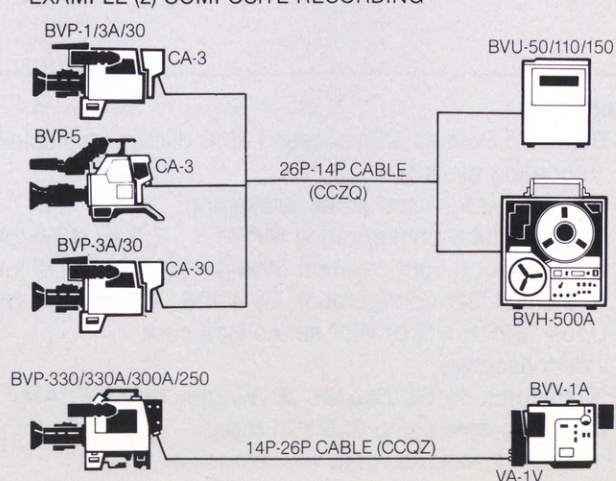
	CA-3	CA-30/30P	CA-300
Dimensions	90(W) × 178(H) × 75mm(D) (3.5 × 7 × 2.9")	90(W) × 240(H) × 150mm(D) (3.5 × 9.4 × 5.9")	59(W) × 130(H) × 67mm(D) (2.3 × 5.1 × 2.6")
Weight	550 g (1 lb 3 oz)	950 g (2 lb 1 oz)	350 g (12 oz)
Power consumption	0.85W with BVP-3A 0.5W with BVP-1	1.5W	0.64W
Outputs	Component/Composite (26P)	Component/Composite (26P) CCU out (41P)	Component/Composite (26P)

SEPARATED OPERATION EXAMPLES

EXAMPLE (1) COMPONENT RECORDING



EXAMPLE (2) COMPOSITE RECORDING



Betacam Player

BVW-10/10P/10S/10PM

(NTSC) (PAL) (SECAM) (PAL-M)



- Direct interface (RS-422) with:
BVW-10/15/40 Betacam
BVH-2000/2180/2500/2800/2830 1" VTR
BVU-800/820/850 VTR
BVE-800/900/3000A/5000 editor
- 36-pin parallel interface with:
BVE-500/BVU-200 or BVR-510A
- Built-in TBC with D.O.C.
- Shuttle mode picture search function:
 $1/30$, $1/10$, $1/5$, $1/2$, 2, 5, 10 times normal, forward, and reverse
- Jog mode function
- Recognizable color picture up to ± 5 times normal speed
- Built-in SMPTE/EBU time code reader
- Dub component out (12-pin)
- Direct dubbing to BVU series U-matic (7-pin)

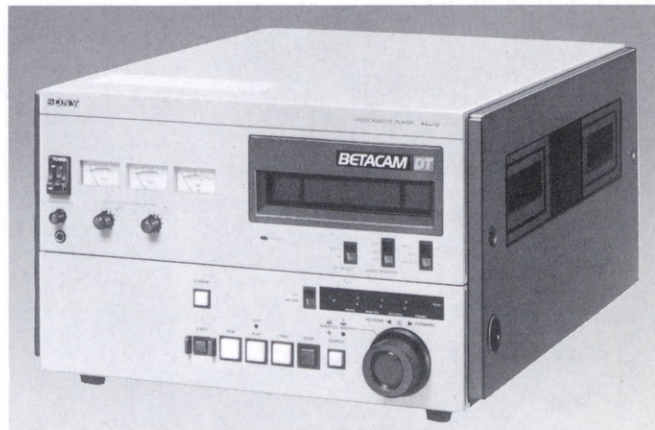
Supplied accessories

AC power code
RCC-5G (9-pin, 5m) remote control cable
Extension boards
Operation and maintenance manual

Betacam Player with Dynamic Tracking*

BVW-15/15P/15S

(NTSC) (PAL) (SECAM)



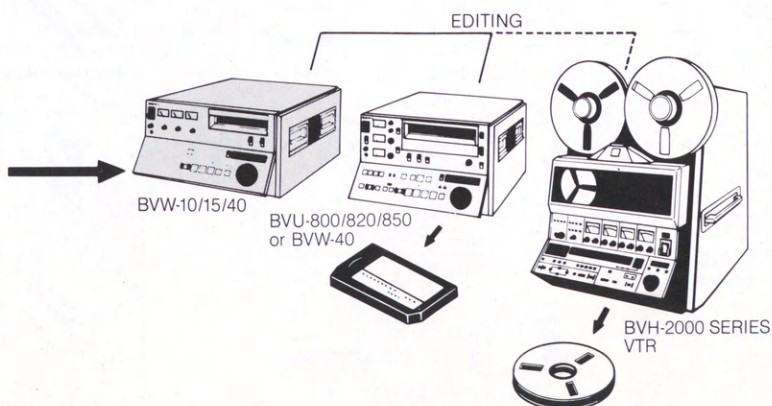
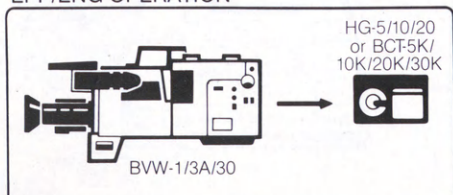
- DT Playback from -1 to $+2$ times normal speed
- Direct interface (RS-422) with:
BVW-10/15/40
BVH-2000/2180/2500/2800/2830 series
BVU-800/820/850 series
BVE-800/900/3000A/5000 editor
- 36-pin parallel interface with:
BVE-500/800/1000/3000A or BVR-510A
- Built-in TBC with DOC (Dropout Compensation)
- Shuttle mode picture search:
 $1/30$, $1/10$, $1/5$, $1/2$, 1, 2, 5, 10 times normal, forward, and reverse
- Jog mode function
- Recognizable color picture up to ± 5 times normal speed, Monochrome pictures up to ± 10 times normal speed
- Built-in SMPTE/EBU time code reader
- CTDM and Component (Y, R-Y, B-Y) dubbing outputs
- Direct dubbing to BVU series U-matic
- Instant servo lock (less than 0.3 sec. from standby)
- Built-in switchable Dolby* C NR System

Supplied accessories

AC power code
RCC-5G (9-pin, 5m) remote control cable
Extension board
Operation and maintenance manual

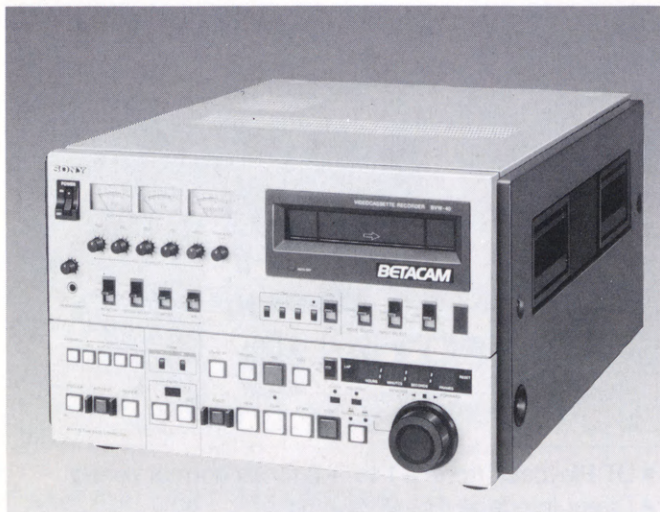
CONNECTIONS (BVW-10/15/40)

EFP/ENG OPERATION



Betacam Recorder/Player BVW-40/40P/40S

(NTSC) (PAL) (SECAM)



- Built-in full scale editing function
- Direct interface (RS-422) with:
 - BVW-10/15/40 Betacam
 - BVH-2000/2180/2500/2800/2830 1" VTR
 - BVU-800/820/850 series VTR
 - BVE-800/900/3000A/5000 editor
- 36-pin parallel interface with:
 - BVE-500/BVU-200 or BVR-510A
- Independent time code track
 - time code re-insertion capability
- Plug-in SMPTE/EBU time code generator/reader
- Direct dubbing to BVU series U-matic (7-pin)
- Dub component in/out (12-pin)
- Built-in TBC with D.O.C.
- Jog/Shuttle mode function

Supplied accessories

AC power cord
RCC-5G (9-pin, 5m) remote control cable
12-pin dubbing cable (12-pin, 5m)
Extension boards
Operation and maintenance manual

Betacam Player BVW-21/21P

(NTSC) (PAL)



- A Betacam viewer perfectly suited for use in the office or in the field.
- Compact and lightweight for field operation (7.6 kg with a BP-90 battery)
- Low power consumption (18W) and versatile power sources (NP-1 or BP-90 batteries or the AC-21 AC adaptor)
- Picture search capability which displays a B/W picture at ± 3.5 times normal speed
- Optional plug-in RF modulator for VHF/UHF input
- LCD display for tape counter or time code indication
- High quality audio and video reproduction

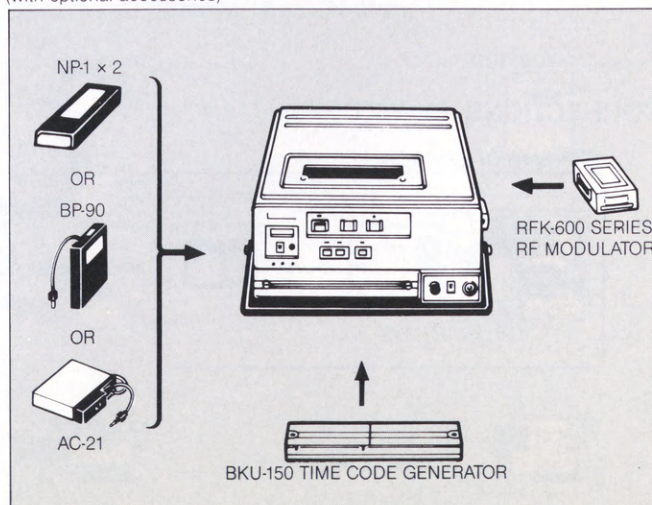
Supplied accessories

Extension board
Operation and maintenance manual

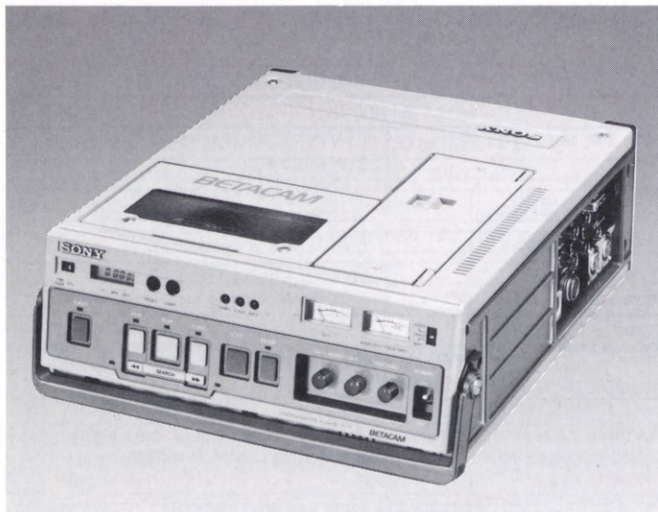
Optional accessories

AC-21 AC adaptor
RFK-600 series RF modulator
LC-25 soft carrying case

BVW-21 BASIC PRODUCT CONFIGURATION (with optional accessories)



Betacam Portable Player
BVW-20/20P/20S
 (NTSC) (PAL) (SECAM)



- Compact and lightweight: 8.9 kg (19.6 lb) with batteries and tape.
- Location replay for monitoring
- Immediate transmission via microwave link in field operation
- 80 minutes continuous operation with two NP-1 batteries
- Swing search function: approx. ± 3.5 times normal speed with a recognizable picture
- Built-in SMPTE/EBU time code reader
- Provision for external TBC
- Two audio meters for precise audio level adjustment
- Warning indicators of battery status, tape slack, and condensation

Supplied accessories

ANS-32 antenna selector (NTSC only)
 Coaxial cable with F-type connector (NTSC only)
 EX-41 extension board
 Operation and maintenance manual

Betacam Portable Recorder/Player
BVW-25/25P
 (NTSC) (PAL)



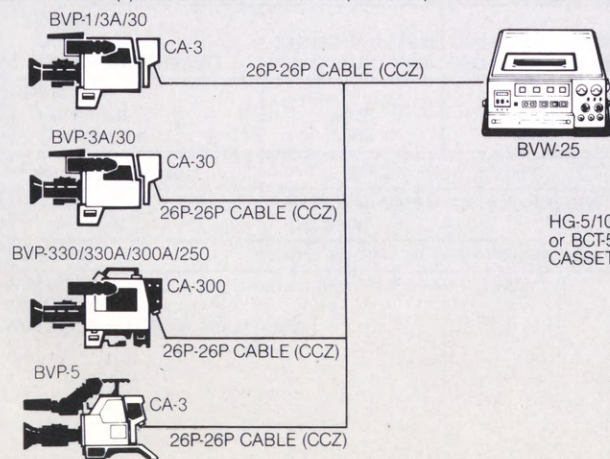
- Very compact and lightweight 8.4 kg/18.8 lb (including battery and cassette)
- Field recording and playback
- Low power consumption (25W)
- Battery compartment accepts NP-1 or BP-90 batteries
- External TBC connection provided
- Built-in SMPTE/EBU Time Code Generator/Reader
- Composite and component input/output
- Two audio meters for independent adjustment of 2 audio channels
- Warning indications for condensation, tape slack, servo, tape end, battery condition, RF alarm, etc.
- Built-in Dolby C NR system
- Automatic tape back space provides continuous recording with no picture break up at transitions

Supplied accessories

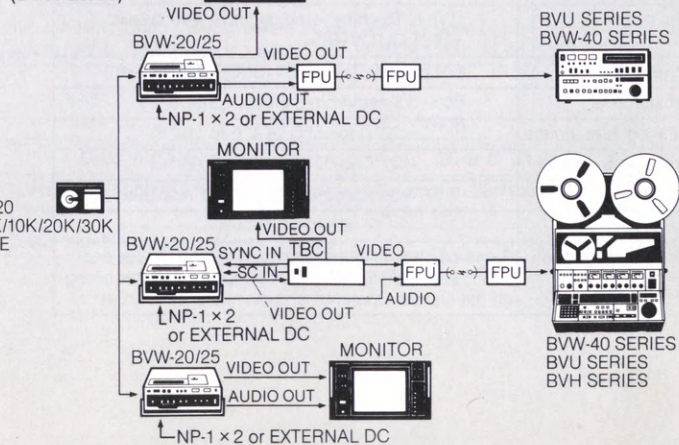
Time Code Generator/Reader (built-in) Shoulder belt
 Extension board Operation and maintenance manual
 Soft carrying case

TYPICAL CONNECTIONS

EXAMPLE (1) FIELD RECORDING (BVW-25)



EXAMPLE (2) FIELD PLAYBACK (BVW-20/25)



CAMERA UNIT FOR BVW-1/3A/30 SERIES

	BVP-1/1P/1S (NTSC, PAL, SECAM)	BVP-3A/3AP/3AS/3APM (NTSC, PAL, SECAM, PAL-M)	BVP-30/30P/30PS (NTSC, PAL, SECAM)
Dimensions height mm (inch) width depth	178 (7") 90 (3.5") 157 (6.1")	240 (9.4") 105 (4.1") 210 (8.3")	
Weight	3.95 kg (8 lb 11 oz)* ¹	4.3 kg (9 lb 8 oz)* ²	
Power requirement	DC 12V	DC 12V	
Power consumption	11W (NTSC/PAL) 12W (SECAM)	20W (NTSC/PAL/PAL-M) 22W (SECAM)	24W (NTSC/PAL/PAL-M) 26W (SECAM)
Pick-up tube	² / ₃ " HBST	² / ₃ " MF "SATICON" (magnetic focus, static deflection)	² / ₃ " Diode Gun MS Plumbicon™ (magnetic focus, static deflection)
Horizontal resolution	400 TV lines	650 TV lines at center (typical)	650 TV lines at center (typical)
Sensitivity	2000 lux with F 4.0 (typical), 90% reflectance	2000 lux with F 4.0 (typical) 90% reflectance	2000 lux with F4.5 (typical), 90% reflectance
Minimum illumination	80 lux (F1.6 lens, +12dB gain)	30 lux (F1.4 lens, +18dB gain)	25 lux (F1.4 lens, +18dB gain)
S/N ratio	NTSC: 54dB (typical) PAL/SECAM: 53dB (typical)	NTSC/PAL-M: 59dB (typical) PAL/SECAM: 57dB (typical)	
Registration zone-1 zone-2 zone-3	Free Free Free	0.1% (within a circle with a diameter corresponding to 80% of picture height) 0.15% (within a circle with a diameter corresponding to picture width) 0.3% (others)	

*1: With 10× zoom lens and viewfinder *2: Without lens

CAMERA UNIT FOR BVW-105/105P

	BVP-5 (NTSC)	BVP-5P (PAL)
Dimensions height mm (inch) width depth	236 (9.3") 100 (3.9") 180 (7.1")	
Weight	3.2 kg (7 lb 1 oz) with viewfinder	
Power requirement	DC 12V	
Power consumption	10.5W with viewfinder	
Pick-up device	3-chip, ² / ₃ " CCD	
Lens mount	Special bayonet mount	
Picture element	510(h) × 492(v)	500(h) × 582(v)
Optical system	F1.4 prism system	
Horizontal resolution	550 TV lines	
Sensitivity	2000 lux with F5.6, 90% reflectance	2000 lux with F5.0, 90% reflectance
Minimum illumination	15 lux (F1.4 lens, +18dB gain)	20 lux (F1.4 lens, +18dB gain)
S/N ratio	58dB	55dB
Registration	0.05% (all zones)	
Geometric distortion	Less than 1%	
Built-in filters	1: 3200°K, 2: 5600°K + ¹ / ₄ ND, 3: 5600°K, 4: 5600°K + ¹ / ₁₆ ND	
Video output	1Vp-p, 75 ohms, sync negative, Two output (TEST OUT, VTR)	
Connectors	VTR (50-pin), TEST OUT (BNC), LENS (12-pin)	
Warm-up time	3.5 sec (from pre-heat condition)	
Operating temperature	-20°C to 45°C (-4°F to 113°F)	
Storage temperature	-20°C to 50°C (-4°F to 122°F)	
Viewfinder	1.5" monochrome, 500 TV lines resolution	
Microphone	Sharp-directional	
Supplied accessories	Tripod adaptor, Extension board, Extractor, 50-pin cap, Rain cover (BVP-5/BVW-105), Cap for a hole after taking off the handle, Operation and maintenance manual	

RECORDER UNIT

	BVV-1A (NTSC/PAL-M)	BVV-1APS (PAL/SECAM)
General	Dimensions height mm (inch) width depth	203 (8") 112 (4.4") 232 (9.1")
	Weight* ¹	4.3 kg (9 lb 8 oz)
	Power requirements	DC 12V ±0.5V
	Power consumption	11W (12V, 0.9A)
	Tape speed	11.86cm/sec
	Writing speed	6.9m/sec
	Wow & flutter	Less than 0.15%
	Recording time* ²	30 min.
Video	S/N ratio	48dB
	Luminance	50dB
	Chrominance	46dB 49dB
Audio	Frequency response	50Hz to 15kHz ±3.0dB
	S/N ratio	50dB (at 3% distortion level)

*1: With battery pack (NP-1) and videocassette (HG-20 or BCT-20K)

*2: With BCT-30K videocassette

PLAYER, PORTABLE PLAYER and RECORDER/PLAYER

			PLAYER		PLAYER WITH DT		RECORDER/PLAYER	
			BVW-10/10PM (NTSC, PAL-M)	BVW-10P/10S (PAL, SECAM)	BVW-15 (NTSC)	BVW-15P/15S (PAL, SECAM)	BVW-40/40PM (NTSC, PAL-M)	BVW-40P/40S (PAL, SECAM)
General	Dimensions mm (inch)	height width depth	239 (9.4") 452 (17.8") 580 (22.8")		283 (11.2") 457 (18") 580 (22.8")		283 (11.1") 452 (17.8") 580 (22.8")	
	Weight		30 kg (66 lb 2 oz)		34 kg (74 lb 15 oz)		37 kg (85 lb 5 oz)	
	Power requirements		AC 90 to 265V, 48 to 64Hz		AC 90 to 265V, 48 to 64Hz		AC 90 to 265V, 48 to 64Hz	
	Power consumption		160W max.		180W		280W	
	Tape speed		11.86cm/sec	10.15cm/sec	11.86cm/sec	10.15cm/sec	11.86cm/sec	10.15cm/sec
	Wow & flutter		Less than 0.15% rms	Less than 0.25% DIN	Less than 0.15% rms	Less than 0.25% DIN	Less than 0.15% rms	Less than 0.2% DIN
	Playback or recording time*1		30 min	36 min	30 min	36 min	30 min	36 min
	F. FWD time/Rewind time*2		Less than 90 sec		Less than 90 sec		Less than 90 sec	
	Dynamic Tracking range		—		REV. × 1 to FWD. × 2 speed		—	
Video	Bandwidth							
	Luminance		30Hz to 4.1MHz ± 0.5 dB	25Hz to 4.0MHz ± 0.5 dB	30Hz to 4.1MHz ± 0.5 dB	25Hz to 4.0MHz ± 0.5 dB	30Hz to 4.1MHz ± 0.5 dB	25Hz to 4.0MHz ± 0.5 dB
	Chrominance (R-Y/B-Y)		30Hz to 1.5MHz ± 0.5 dB	25Hz to 1.5MHz ± 0.5 dB	30Hz to 1.5MHz ± 0.5 dB	25Hz to 1.5MHz ± 0.5 dB	30Hz to 1.5MHz ± 0.5 dB	25Hz to 1.5MHz ± 0.5 dB
Audio	S/N ratio							
	Luminance		48dB	46dB	48dB	46dB	48dB	46dB
	Chrominance		50dB	49dB	50dB	49dB	50dB	49dB
Audio	Frequency response		50Hz to 15kHz ± 3.0 dB		50Hz to 15kHz ± 3.0 dB		50Hz to 15kHz ± 3.0 dB	
	S/N ratio		Better than 50dB at 3% distortion (Dolby off)		Better than 50dB at 3% distortion (Dolby off)		Better than 50dB at 3% distortion (Dolby off)	
	Distortion		Less than 2% (at 1kHz reference level)		Less than 2% (at 1kHz reference level)		Less than 2% (at 1kHz reference level)	

*1 With BCT-30K videocassette

*2 With HG-20 or BCT-20K videocassette

			PORTABLE PLAYER		PORTABLE PLAYER		PORTABLE RECORDER/PLAYER	
			BVW-20 (NTSC)	BVW-20P/20PS (PAL, SECAM)	BVW-21 (NTSC)	BVW-21P (PAL)	BVW-25 (NTSC)	BVW-25P (PAL)
General	Dimensions mm (inch)	height width depth	128 (5") 333 (13.1") 378 (14.9")		140 (5.5") 302 (11.9") 343 (13.5")		140 (5.5") 302 (11.9") 343 (13.5")	
	Weight*1		8.9 kg (19 lb 10 oz)		7.6 kg (16 lb 12 oz)		8.4 kg (18 lb 8 oz)	
	Power requirements		DC 12 ± 0.5 V		DC 12V		DC 12 ± 0.5 V	
	Power consumption		25W		18W		25W	
	Tape speed		11.86cm/sec	10.15cm/sec	11.86cm/sec	10.15cm/sec	11.86cm/sec	10.15cm/sec
	Wow & flutter		Less than 0.15% rms	Less than 0.25% DIN	Less than 0.15% rms	Less than 0.25% DIN	Less than 0.15% rms	Less than 0.25% DIN
	Operating time		Approx. 80min with NP-1 (× 2)		Approx. 94 min with NP-1 (× 2) Approx. 130 min with BP-90		Approx. 40 min with BVP-330A and NP-1 (× 2) Approx. 60 min with BVP-330A and BP-90 (Approx. 120 min without camera)	
	Recording or playback time*2		30 min	36 min	30 min	36 min	30 min	36 min
	F. FWD time/Rewind time*3		Less than 150 sec		Less than 150 sec		Less than 150 sec	
Video	Bandwidth							
	Luminance		30Hz to 4.1MHz ± 0.5 dB	25Hz to 4.0MHz ± 0.5 dB	30Hz to 4.1MHz ± 0.5 dB	25Hz to 4.0MHz ± 0.5 dB	30Hz to 4.1MHz ± 0.5 dB	25Hz to 4.0MHz ± 0.5 dB
	Chrominance (R-Y/B-Y)		30Hz to 1.5MHz ± 0.5 dB	25Hz to 1.5MHz ± 0.5 dB	30Hz to 1.5MHz ± 0.5 dB	25Hz to 1.5MHz ± 0.5 dB	30Hz to 1.5MHz ± 0.5 dB	25Hz to 1.5MHz ± 0.5 dB
Audio	S/N ratio							
	Luminance		48dB	46dB	48dB	46dB	48dB	46dB
	Chrominance		50dB	49dB	50dB	49dB	50dB	49dB
Audio	Frequency response		50Hz to 15kHz ± 3.0 dB		50Hz to 15kHz ± 3.0 dB		50Hz to 15kHz ± 3.0 dB	
	S/N ratio		Better than 50dB at 3% distortion level (Dolby off)		Better than 50dB at 3% distortion level (Dolby off)		Better than 50dB at 3% distortion level (Dolby off)	
	Distortion		Less than 2% (at 1kHz reference level)		Less than 2% (at 1kHz reference level)		Less than 2% (at 1kHz reference level)	

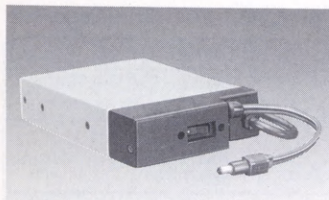
*1 With HG-20 or BCT-20K and BP-90 × 1 (BVW-21/25)/NP-1 × 2 (BVW-20)

*2 With BCT-30K videocassette

*3 With HG-20 or BCT-20K videocassette

BETACAM

BETACAM SYSTEM OPTIONAL ACCESSORIES



AC-21/21CE
AC Adaptor for BVW-21/21P



AC-500/500CE
AC Adaptor



BC-1WA
Battery Charger for NP-1 (up to four NP-1s)



BC-210/210CE
Battery Charger for BP-90 (up to four BP-90s)



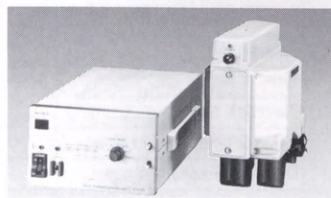
NP-1
NiCd Rechargeable Battery



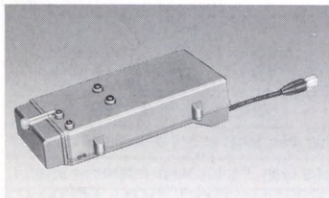
BP-90
NiCd Rechargeable Battery



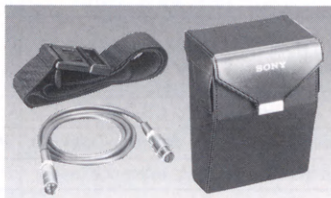
***CCU-300/300P/300PM**
Camera Control Unit for Separate Camera Use



***DCU-300/300P/300PM**
Digital Command Unit for Separate Camera Use



DC-100
Battery Case of NP-1 for BVV-1A



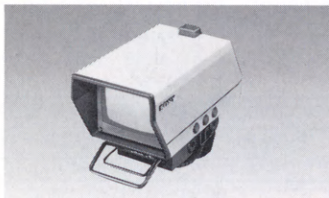
DC-210
Battery Case for BP-90



DC-300
Battery Case for BP-90



DC-310
Battery Case for NP-1 (up to two NP-1's)



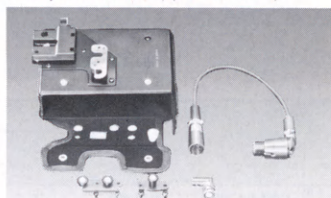
BVF-50/50CE
5-inch B/W Viewfinder



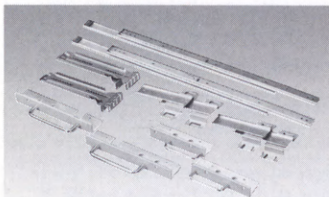
RM-P3
Camera Remote Control Unit for BVP-3A/30



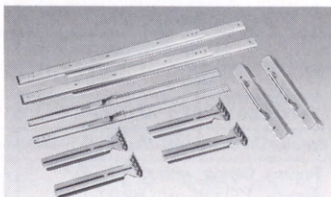
WRR-27
Wireless Microphone Receiver



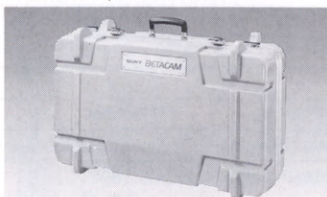
BTA-27
Attachment Kit for WRR-27



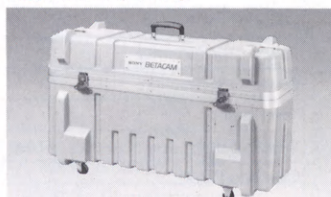
RMM-100
Rack Mount Kit for BVW-10



BK-805
Rack Mount Kit for BVW-10/40



LC-101
Carrying Case for BVW-1



LC-301
Carrying Case for BVW-3A/30



12-pin Dubbing Cable (5m)
For BVW-10/40 (Part # 1-557-413-11)

OPTIONAL ACCESSORIES COMBINATION CHARTS

		Camera adaptor			Camera	Betacam recorder
		CA-3	CA-30	CA-300	BVP-250/300A/330/330A	BVV-1A
Battery case for NP-1	DC-100	—	—	—	—	○
	DC-310	○	○	○	○	—
Battery case for BP-90	DC-210	○	○	○	○	○
	DC-300	○	○	○	○	—

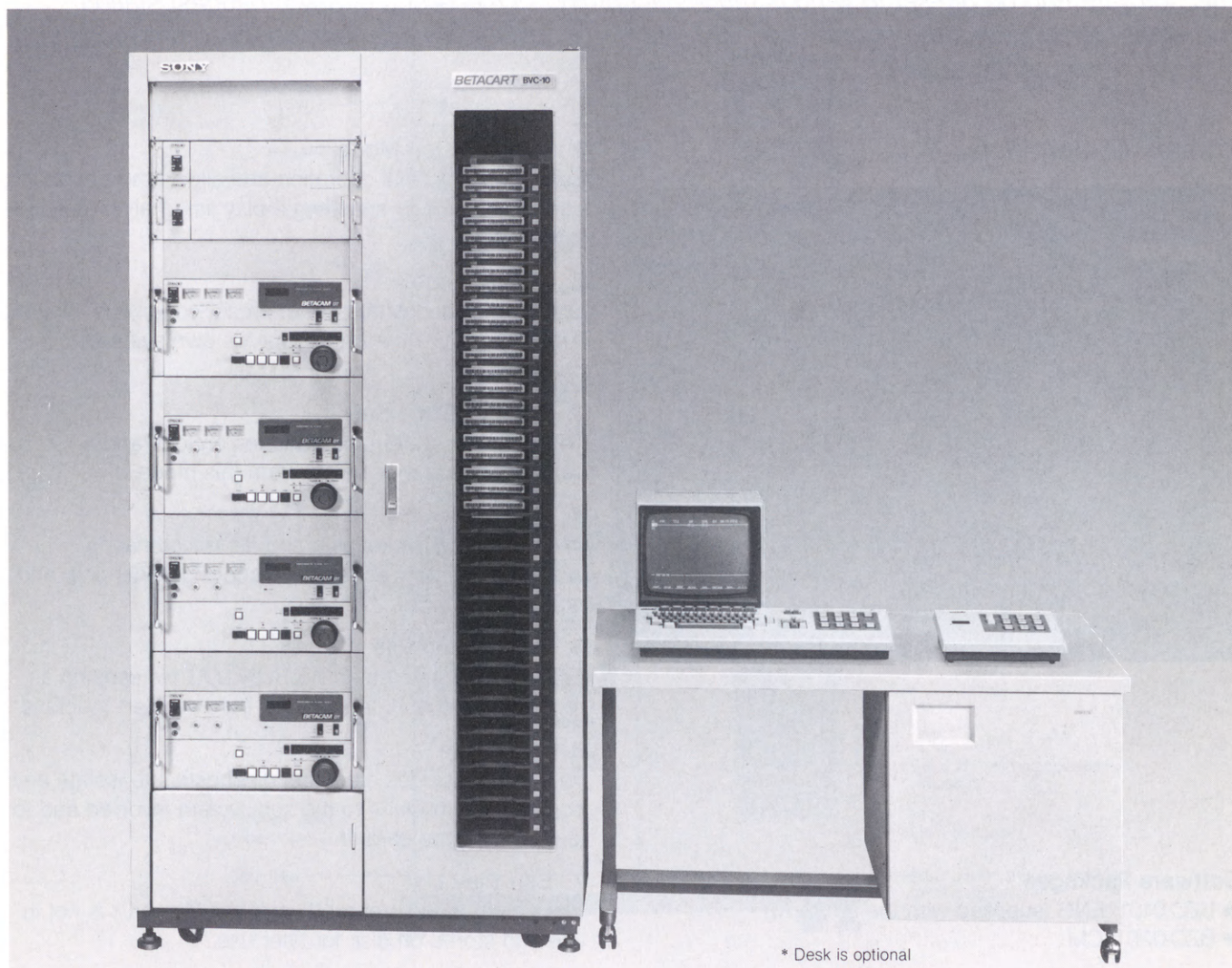
	VA-1 VA-1V	BVH-500A BVU-50/110/150	BVP-1/5/3A/30 with CA-3, CA-30	BVP-250/300A 330A with CA-300	BVP-110/250 300A 330A
CCQ-cable 14—14-pin	—	○	—	—	○
CCQZ-cable 14—26-pin	○ (VA-1V only)	—	—	—	○
CCZQ-cable 26—14-pin	—	○	○	—	—
CCZ-cable 26—26-pin	○	—	○	○	—

* A SECAM version of the CCU-300/
DCU-300 is available using the BK-303/
305 conversion kit.

Betacam Multi-cassette System

BVC-10/10P

(NTSC) (PAL)



* Desk is optional

- Betacam format compatibility provides superior picture quality
- Rapid random access to up to 40 cassette BCT-5K/10K/20K or HG-5/10/20 video tape material using bar code identification
- Instant servo lock and still field playback capability using advanced DT technology
- Equipped with a matrix switcher for 4 audio/video inputs and outputs
- Accepts host computer or other external commands for a wide range of studio operation
- Bar code cassette ID system. Bar code reader is built into the cassette transport elevator
- Completely software based control for flexible and versatile system operation
- Test mode provided for self diagnostics
- Tape tension release mode available

System Composition (BVC-10)

- BVC-E10 Console
 - Cassette bins (max. 40)
 - Cassette elevator
 - Bar code reader, Floppydisk drive × 2
 - BZC-0101 ENG software package
- BVW-11 Betacam player × 4
- BVS-V10 Video matrix switcher
- BVS-A10 Audio matrix switcher

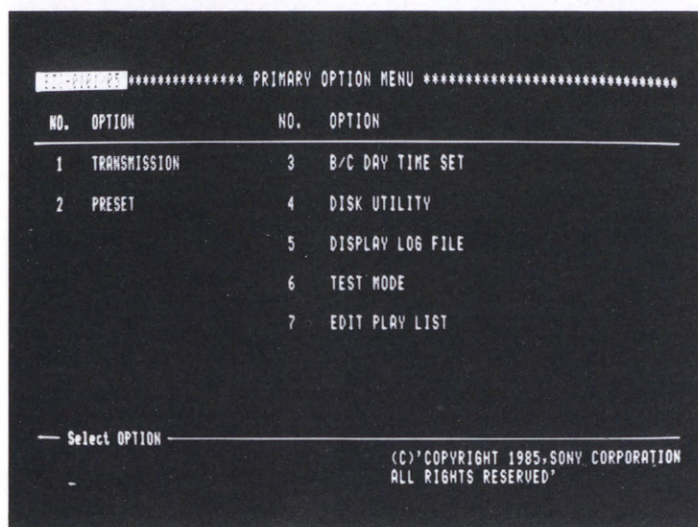
Optional Equipment

1. BVR-11 Remote Control Unit (3ch)
2. BVR-12 Simple Remote Control Unit (3ch)
3. BVR-14 Remote Control Unit (4ch)
4. BVR-15 Simple Remote Control Unit (4ch)
5. BVR-20 Monitor Remote Control Unit
6. BVBC-10 Bar Code Writer
7. BVBP-11 Bar Code Printer
8. PVM-123 Display Monitor (B/W)

Sony offers two BETACART software packages, ENG and COMMERCIAL MESSAGE to meet end-user applications.

This software can be pre-set to various modes according to the needs of any broadcast station. The figure below shows the primary option menu of the ENG software. After selecting the mode, the data you need can be entered.

Primary Option Menu



1. Transmission Mode

Selected for normal operation and allows the operator to control the cart by specifying a play list of all events to be transmitted.

2. Preset Mode

User is provided with a set of preset conditions allowing him to configure the system for his own system operation.

3. B/C Day Time Set

The Betacart system incorporates a clock and a calendar which may be set from this mode.

4. Disk Utility

Allows disk house keeping and file maintenance including directory access, file copying, renaming, and erasing.

5. Display Log File

The Betacart creates an AS RUN LOG file keeping a record of all events transmitted from the cart machine.

6. Test Mode

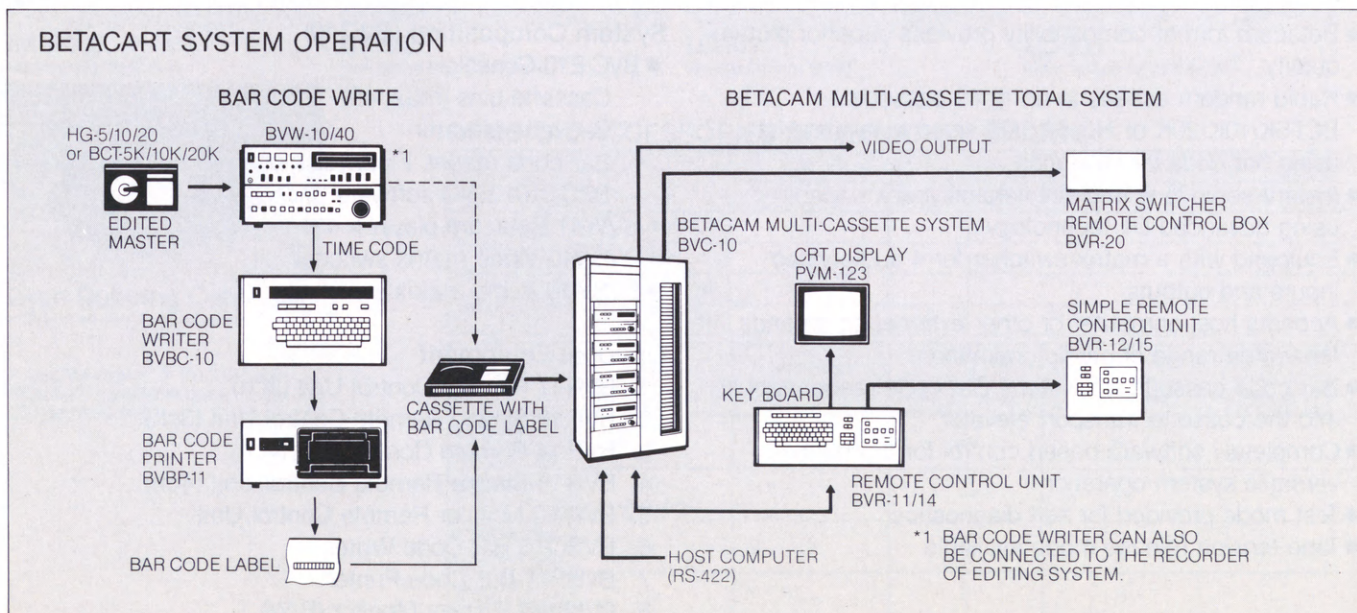
Test mode includes electrical diagnostics to isolate any control system faults to the sub-system involved and to identify the type of fault.

7. Edit Play List

Play lists may be prepared while the Betacart is not in use and stored on disk for later use.

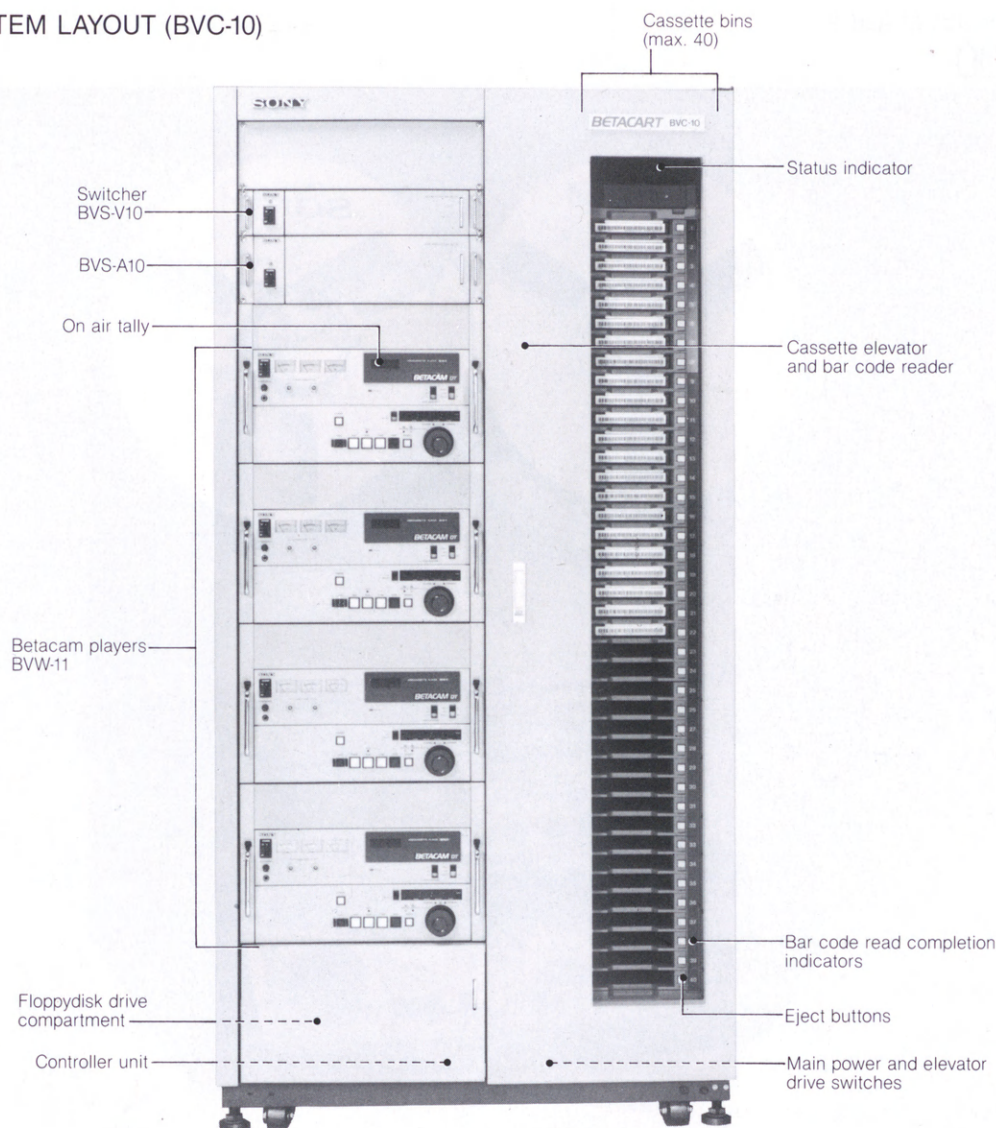
Software Packages

- BZC-0101: ENG (supplied with the BVC-E10)
- BZC-0201: CM



BETACART SYSTEM SPECIFICATIONS

BETACART SYSTEM LAYOUT (BVC-10)



GENERAL

Power requirements:	AC 90 to 265V, 48 to 64Hz
Power consumption:	1.4KW
Operating temperature:	5°C to 40°C (41°F to 104°F)
Dimensions:	1025mm(W) x 2050(H) x 710mm(D) (40.4 x 80.7 x 28.0")
Weight:	520 kg (1146 lb)
Tape format:	Betacam

OPERATIONAL

Television standard:	525/60 NTSC, 625/50 PAL
Number of cassette bins:	40
Maximum playing time:	20 min. NTSC, 24 min. PAL
SOM/EOM format:	SMPTE/EBU time code
Preroll time:	User selectable (minimum 3 sec)
Maximum events:	300 events memory in RAM
Cueing accuracy:	± 1 frame
Floppydisk format:	3.5-inch
Servo lock up:	0.3 second from standby mode (BVW-11)
Software package:	BZC-0101 (ENG, supplied with the BVC-E10) BZC-0201 (CM)

VIDEO

Bandwidth:	Luminance: 30Hz to 4.1MHz, ± 0.5 dB Chrominance: 30Hz to 1.5MHz, ± 0.5 dB (R-Y and B-Y)
K-factor:	Less than 3%, 2T pulse (typical)
S/N ratio:	Luminance: 48dB NTSC, 47dB PAL Chrominance: 50dB NTSC, 49dB PAL
Differential gain:	Less than 3%
Differential phase:	Less than 3°
Chrominance/Luminance delay:	Less than 20 nsec

AUDIO

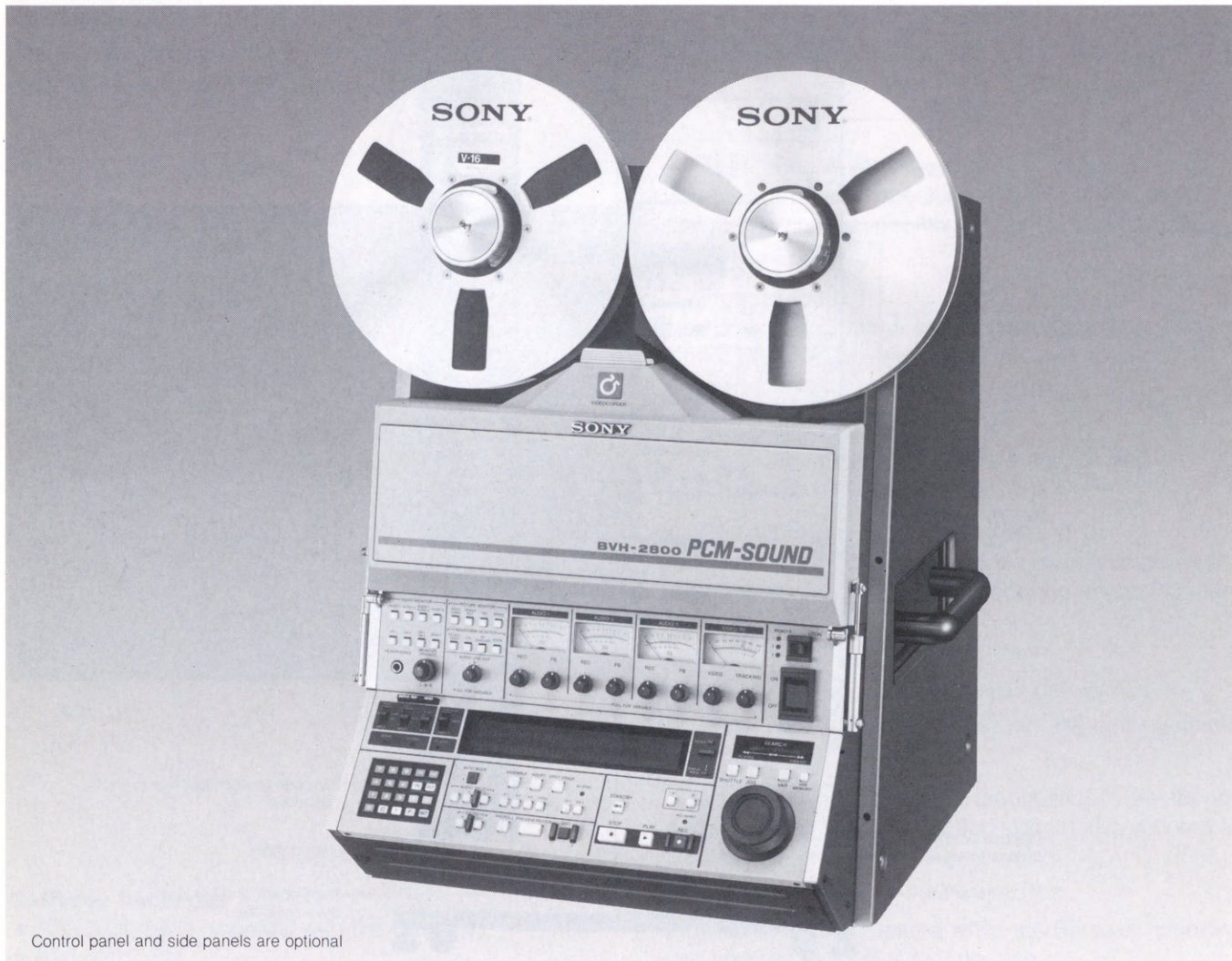
Frequency response:	Channels 1 and 2 50Hz to 15.0kHz ± 3.0 dB
S/N ratio:	50dB at 3.0% THD
Distortion:	2.0% at 1.0kHz reference level
Wow and flutter:	0.15% RMS, 0.5 to 200Hz, NAB, unweighing

It is not possible to give a meaningful value for cycle time since it is dependent on many factors. However, 10-second spots can be played back to back.

1-INCH VIDEO TAPE RECORDERS

1-inch VTR with Digital Audio

BVH-2800



Control panel and side panels are optional

- High quality audio owing to PCM (Pulse Code Modulation) recording/playback using the optional PCM processor
- A total of five audio channels*
 - 2 PCM audio and 3 analog audio channels
- Playback compatible with BVH series VTRs
- PCM audio editing capability
- Video and audio (analog and digital) simultaneous playback during recording/editing
- Plug-in TBC (optional)
 - 1Hp-p correction window
 - Recognizable B/W picture at up to ± 50 times normal speed (with BKH-2100)
 - For DT playback from -1 to $+3$ times normal speed
 - 15Hp-p correction window
 - Recognizable color picture at up to ± 8 times normal speed (with BKH-2150)
- High-speed Dynamic Tracking system
 - Wide DT range from -1 to $+3$ times normal

speed
Programmed play
DT variable memory function

- Easy threading
 - Movable head gate system with precise cross roller guide
- Two-hour recording and playback
- Plug-in time code board (optional)
- Versatile system interface
- Front access and improved serviceability
- Self-diagnostics

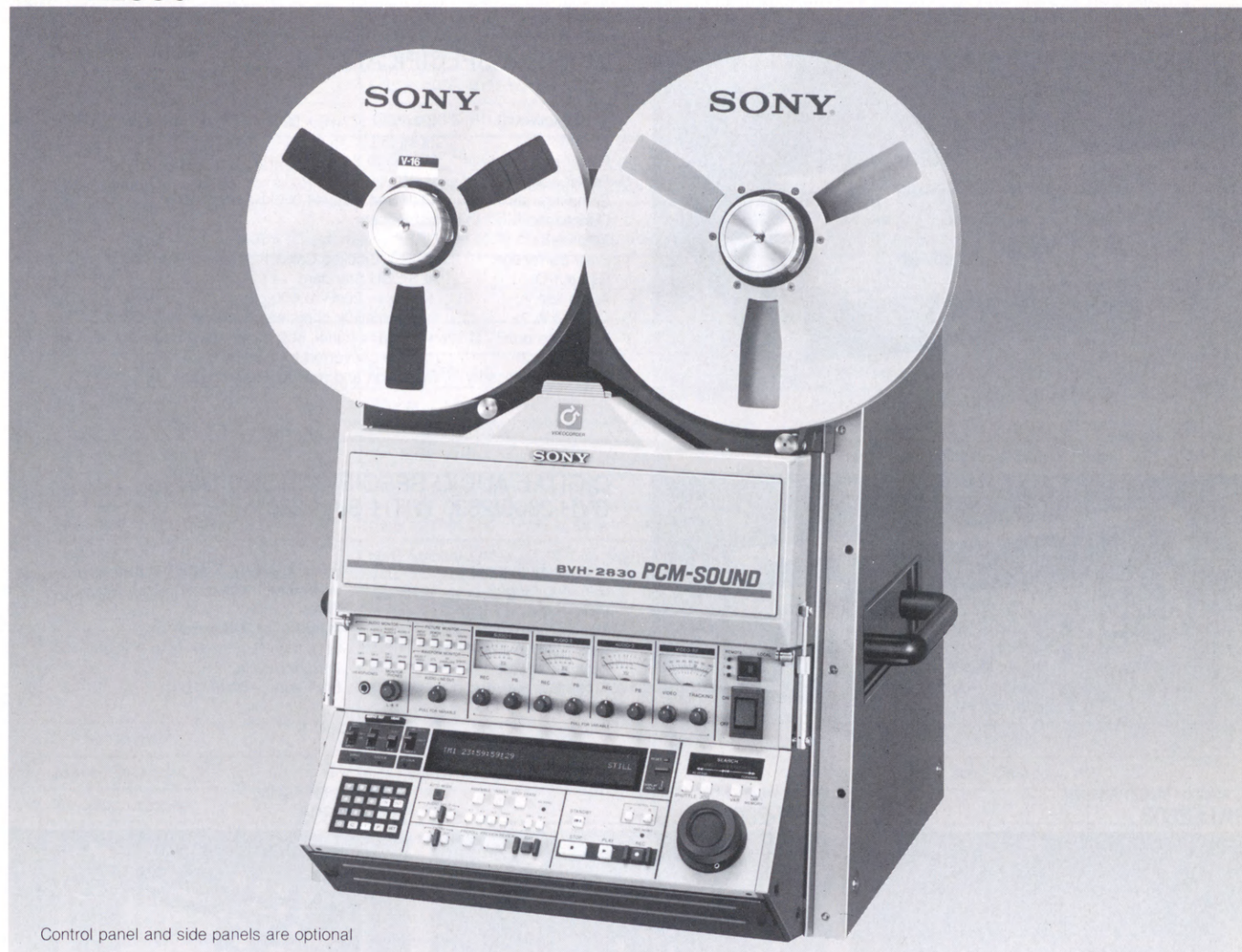
* Analog audio CH-3, which is assigned to the time code track in normal operation, can be used as an audio channel.

Supplied accessories

50-pin connector for REMOTE OUT-3
37-pin connector for MONITOR SELECT
Empty reel R1-11V (BVH-2800)
Extension board EX-113
Phone plug adaptor
PC board indication label
Screw B5 x 16
Operation and maintenance manual

1-inch VTR with Digital Audio, 3-hour Operation

BVH-2830



Control panel and side panels are optional

- New tape transport with three-hour recording and playback capability
- High quality audio owing to PCM (Pulse Code Modulation) recording/playback using the optional PCM processor
- A total of five audio channels*
 - 2 PCM audio and 3 analog audio channels
- Playback compatible with BVH series VTRs
- PCM audio editing capability
- Video and audio (analog and digital) simultaneous playback during recording/editing
- Plug-in TBC (optional)
 - 1Hp-p correction window
 - Recognizable B/W picture at up to ± 50 times normal speed (with BKH-2100)
 - For DT playback from -1 to $+3$ times normal speed
 - 15Hp-p correction window
 - Recognizable color picture at up to ± 8 times normal speed (with BKH-2150)
- High-speed Dynamic Tracking system

Wide DT range from -1 to $+3$ times normal speed

Programmed play
DT variable memory function

- Easy threading
- Movable head gate system with precise cross roller guide
- Plug-in time code board (optional)
- Versatile system interface
- Front access and improved serviceability
- Self-diagnostics

* Analog audio CH-3, which is assigned to the time code track in normal operation, can be used as an audio channel.

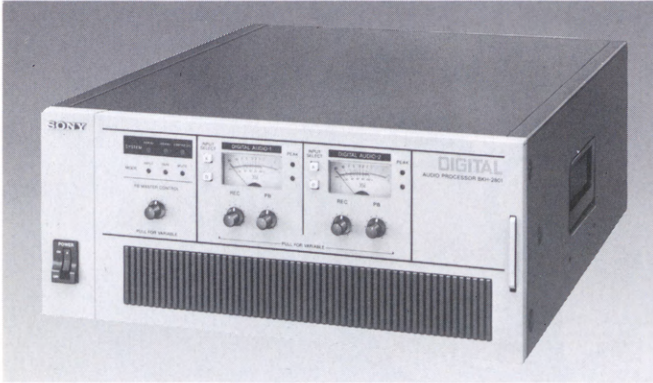
Supplied accessories

50-pin connector for REMOTE OUT/3
37-pin connector for MONITOR SELECT
Empty reel R1-14V (BVH-2830)
Extension board EX-113
Phone plug adaptor
PC board indication label
Screw B5 $\times$ 16
Operation and maintenance manual

1-INCH VIDEO TAPE RECORDERS

BVH-2800/2830 OPTIONAL ACCESSORIES

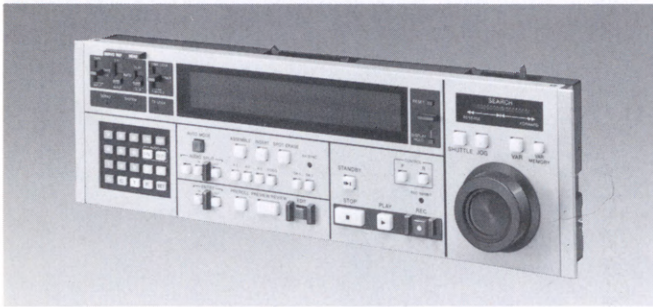
PCM Audio Processor
BKH-2801



BKH-2801 SPECIFICATIONS

Dimensions:	424(W) x 177(H) x 520mm(D)(16.7 x 7 x 20.5")
Weight:	24 kg (52 lb 15 oz)
Power requirements:	AC 100 to 240V, 50/60Hz
Power consumption:	150W
Sampling rate:	48kHz/44.1kHz/44.056kHz selectable
Quantization:	16-bit linear
Emphasis:	On/off switchable (T1=50μsec, T2=15μsec)
Error correction:	BCIRC (Blocked Cross Interleave Reed-Solomon Code)
Digital I/O:	AES/EBU Standard
Audio line in:	+28 to -20dB at 600 ohms
(CH-1 & 2)	600 ohms/10k ohms selectable, balanced
Audio line out:	+8dBm nominal, 600 ohms, balanced
(CH-1 & 2)	(can be converted to 150 ohms)
Supplied accessory:	Operation and maintenance manual

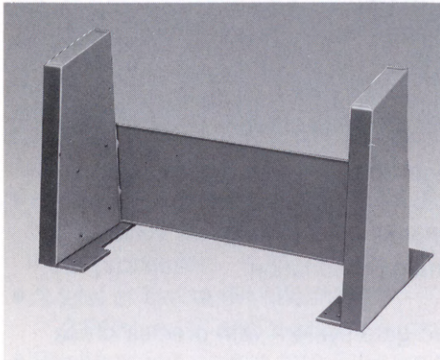
Control Panel
BKH-2802



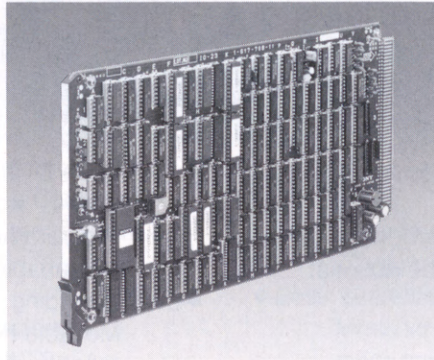
DIGITAL AUDIO SPECIFICATIONS OF BVH-2800/2830 WITH BKH-2801

Frequency response:	20Hz to 20kHz ± 0.5 dB (relative to 1kHz)
Dynamic range:	90dB (emphasis on at 1kHz)
Head room:	20dB
Nominal level (0 VU):	+8dBm (at 600 ohms)
Total harmonic distortion:	Less than 0.05% (1kHz at 0 VU)
Wow and flutter:	Immeasurable
Cross talk between two channels:	Less than -85dB (1kHz)

Processor Mount Adaptor
BKH-2803

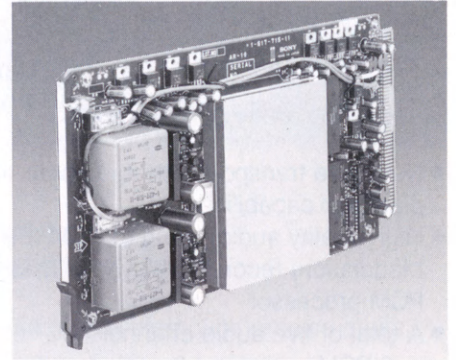


Digital Audio I/O Interface
BKH-2804



- For directly interfacing external AES/EBU format signals

Audio D/A Converter
BKH-2805



- For recording digital input signals to the analog channels

BVH-2800/2830 SPECIFICATIONS

		BVH-2800	BVH-2830
General	Power requirements	AC 100 to 120/220 to 240V $\pm 10\%$, 50/60Hz	AC 100 to 120/220 to 240V $\pm 10\%$, 50/60Hz
	Power consumption	550W max	600W max
	Operating temperature	5°C to 40°C (41°F to 104°F)	5°C to 40°C (41°F to 104°F)
	Humidity	10% to 90% RH (non-condensing)	10% to 90% RH (non-condensing)
	Weight	70 kg (155 lb)	77 kg (170 lb)
	Dimensions (including handle & foot)	570(W) $\times$ 680(H) $\times$ 588mm(D) (22.5 $\times$ 26.8 $\times$ 23.2")	623(W) $\times$ 715(H) $\times$ 572mm(D) (24.5 $\times$ 28.2 $\times$ 22.5")
	Track	1 Video track/3 PCM tracks (2-CH Digital Audio)/2 Audio tracks/1 Time code or cue track (Audio-3)/1 Control track	1 Video track/3 PCM tracks (2-CH Digital Audio)/2 Audio tracks/1 Time code or cue track (Audio-3)/1 Control track
	Tape speed	24.4cm/sec	24.4cm/sec
	Writing speed (Relative speed)	25.59m/sec	25.59m/sec
	Recording time	126min. with 11.75-inch reel	188min. with 14-inch reel
	Time base stability	Within 3 μ sec p-p	Within 3 μ sec p-p
	Servo lock time	Approx. 2 sec (with frame capstan servo mode from standby mode)	Approx. 2 sec (with frame capstan servo mode from standby mode)
	Tape timer accuracy	± 1 frame (with continuous control track)	± 1 frame (with continuous control track)
	Fast forward/Rewind time (Transfer time)	Within 110 sec (with 1 hour tape)	Within 110 sec (with 1 hour tape)
	Recommended tapes	Sony's 1-inch High Density Tape or equivalent	Sony's 1-inch High Density Tape or equivalent
	Reel size	NAB Standard (Max. 11.75-inch type)	NAB Standard (Max. 14-inch type)
Video	Video band width	4.2MHz: ± 0.5 dB 4.5MHz: -3 dB	4.2MHz: ± 0.5 dB 4.5MHz: -3 dB
	S/N ratio	Better than 48dB (unweighted), self recording Better than 47dB (unweighted), interchanged base [peak-peak composite video to rms noise measured with a Rohde & Schwarz noise meter]	Better than 48dB (unweighted), self recording Better than 47dB (unweighted), interchanged base [peak-peak composite video to rms noise measured with a Rohde & Schwarz noise meter]
	Differential gain	Less than 4% (with Sony TBC)	Less than 4% (with Sony TBC)
	Differential phase	Less than 4° (with Sony TBC)	Less than 4° (with Sony TBC)
	Transient response	Less than 1	Less than 1
	"K" factor (2T pulse)	Less than 1%	Less than 1%
	Tilt (Hor. & Vert.)	Less than 1%	Less than 1%
	Moire	Less than -40 dB (75% Color Bars)	Less than -40 dB (75% Color Bars)
	Chrominance/Luminance delay	Less than 20 n sec	Less than 20 n sec
Analog Audio	Low frequency linearity	Less than 0.98	Less than 0.98
	Audio frequency response	CH-1, CH-2 & CH-3 50Hz - 15kHz/ ± 1.5 dB 200Hz - 7.5kHz/ ± 1.0 dB (relative to 1kHz)	CH-1, CH-2, CH-3 50Hz - 15kHz/ ± 1.5 dB 200Hz - 7.5kHz/ ± 1.0 dB (relative to 1kHz)
	S/N ratio	CH-1 & CH-2 Better than 56dB CH-3 Better than 50dB (with respect to 8dB above nominal level)	CH-1 & CH-2 Better than 56dB CH-3 Better than 56dB (with respect to 8dB above nominal level)
	Distortion	CH-1, CH-2 & CH-3 Less than 1% (1kHz at 0VU)	CH-1, CH-2 & CH-3 Less than 1% (1kHz at 0VU)
	Wow & flutter	Less than 0.1% rms (0.5 - 200Hz NAB unweighted)	Less than 0.1% rms (0.5 - 200Hz NAB unweighted)
Crosstalk	Crosstalk (at 1kHz)	Between any two channels Less than -60 dB (typical)	Between any two channels Less than -60 dB (typical)

1-INCH VIDEO TAPE RECORDERS

1-inch VTR

BVH-2500/2500P/2500PM

(NTSC)

(PAL)

(PAL-M)



Control panel is supplied and side panels are optional

BVH-2500

- Various Δt recording modes:

- STILL—Records or replaces a selected field or frame

- STEP—Steps forward one time increment and records or replaces a selected field or frame

- SLOW—Records at speeds from $1/60$ to $8/60$ (NTSC), $1/50$ to $3/50$ (PAL), $1/90$ to $5/60$ (PAL-M) normal, set by the variable speed control.

- No preroll for Δt recording
- Compatible with SMPTE/EBU type C format
- Standard real time recording
- Instantaneous and repeatable re-write capability using a new DT Record, Play and Erase Head
- Approx. 400,000 fields or 200,000 frames recording capability with 2-hour reel
- Provided with all the features present in a BVH-2000
- Built-in time code generator/reader

Supplied accessories

50-pin connector for REMOTE OUT-3
37-pin connector for MONITOR SELECT
Empty reel
Extension board
Phone plug adaptor
Operation and maintenance manual

Δt RECORDING APPLICATIONS

- STILL : Video disc mastering
Data filing
Electronic slide storage, etc.
- STEP : Computer graphic animation
Studio camera animation, etc.
- SLOW : Various scientific analysis, etc.

BVH-2500 SERIES SPECIFICATIONS

		BVH-2500	BVH-2500PS	BVH-2500PM
General	Power requirements	AC 100 - 120V $\pm 10\%$	AC 100/120/220/240V $\pm 10\%$	AC 100/120/220/240V $\pm 10\%$
	Power consumption	550W max	550W max	550W max
	Operating temperature	5°C to 40°C (41°F to 104°F)	5°C to 40°C (41°F to 104°F)	5°C to 40°C (41°F to 104°F)
	Humidity	10% to 90% RH (non-condensing)	10% to 90% RH (non-condensing)	10% to 90% RH (non-condensing)
	Weight	70 kg (155 lb)	70 kg (155 lb)	70 kg (155 lb)
	Dimensions (including handle & foot)	570(W) $\times$ 680(H) $\times$ 588mm(D) (22.5 $\times$ 26.8 $\times$ 23.2")	570(W) $\times$ 680(H) $\times$ 588mm(D) (22.5 $\times$ 26.8 $\times$ 23.2")	570(W) $\times$ 680(H) $\times$ 588mm(D) (22.5 $\times$ 26.8 $\times$ 23.2")
	Recording system	High Band FM Recording	High Band FM Recording	High Band FM Recording
	Recording heads	1.5-Head System 1 head for Video track, 1 head for Sync track	1.5-Head System 1 head for Video track, 1 head for Sync track	1.5-Head System 1 head for Video track, 1 head for Sync track
	Track	1 Video track/1 Sync track/2 Audio tracks/ 1 Time code or cue track (Audio-3)/ 1 Control track	1 Video track/1 Sync track/3 Audio tracks (one track, option)/1 Time code or cue track (Audio-3)/1 Control track	1 Video track/1 Sync track/2 Audio tracks/ 1 Time code or cue track (Audio-3)/ 1 Control track
	Tape speed	24.4cm/sec	23.98cm/sec	24.4cm/sec
	Writing speed (Relative speed)	25.59m/sec	21.39m/sec	25.59m/sec
	Recording time	126min. with 11.75-inch reel	128min. with 11.75-inch reel	126min. with 11.75-inch reel
	Time base stability	Within 3 μ sec p-p	Within 3 μ sec p-p	Within 3 μ sec p-p
	Servo lock time	Approx. 2 sec (with frame capstan servo mode from standby mode)	Approx. 3 sec (with 4-field lock mode from standby mode)	Approx. 3 sec (with 4-field lock mode from standby mode)
	Tape timer accuracy	± 1 frame (with continuous control track)	± 1 frame (with continuous control track)	± 1 frame (with continuous control track)
	Fast forward/Rewind time (Transfer time)	Within 110 sec (with 1 hour tape)	Within 110 sec (with 1 hour tape)	Within 110 sec (with 1 hour tape)
	Recommended tapes	Sony's 1-inch High Density Tape or equivalent	Sony's 1-inch High Density Tape or equivalent	Sony's 1-inch High Density Tape or equivalent
	Reel size	NAB Standard (Max. 11.75-inch type)	NAB Standard (Max. 11.75-inch type)	NAB Standard (Max. 11.75-inch type)
Video	Video band width	Flat to 4.2MHz: ± 0.5 dB 4.5MHz: -3dB	Flat to 5MHz: ± 0.5 dB 5.5MHz: -3dB	Flat to 4.2MHz: ± 0.5 dB 4.5MHz: -3dB
	S/N ratio	Better than 48dB (unweighted), self recording Better than 47dB (unweighted), interchanged base [peak-peak composite video to rms noise measured with a Rohde & Schwarz noise meter]	Better than 44dB (unweighted), self recording Better than 43dB (unweighted), interchanged base [peak-peak composite video to rms noise measured with a Rohde & Schwarz noise meter]	Better than 48dB (unweighted), self recording Better than 47dB (unweighted), interchanged base [peak-peak composite video to rms noise measured with a Rohde & Schwarz noise meter]
	Differential gain	Less than 4% (with Sony TBC)	Less than 4% (with Sony TBC)	Less than 4% (with Sony TBC)
	Differential phase	Less than 4° (with Sony TBC)	Less than 4° (with Sony TBC)	Less than 4° (with Sony TBC)
	Transient response	Less than 1	Less than 1	Less than 1
	"K" factor (2T pulse) Tilt (Hor. & Vert.)	Less than 1%	Less than 1%	Less than 1%
	Moire	Less than -40dB (75% Color Bars)	Less than -35dB (75% Color Bars)	Less than -40dB (75% Color Bars)
	Chrominance/Luminance delay	Less than 20 n sec	Less than 25 n sec	Less than 20 n sec
	Low frequency linearity	Less than 0.98	Less than 0.98	Less than 0.98
Audio	Audio frequency response	CH-1, CH-2 & CH-3 50Hz - 15kHz/ ± 1.5 dB 200Hz - 7.5kHz/ ± 1.0 dB	CH-1, CH-2, CH-3 50Hz - 15kHz/ ± 1.5 dB 200Hz - 7.5kHz/ ± 1.0 dB	CH-1, CH-2, CH-3 50Hz - 15kHz/ ± 1.5 dB 200Hz - 7.5kHz/ ± 1.0 dB
	S/N ratio	CH-1 & CH-2 Better than 56dB (from 3% distortion level) CH-3 Better than 50dB (from 3% distortion level)	CH-1, CH-2 Better than 56dB (from 3% distortion level) CH-3 Better than 50dB (from 3% distortion level)	CH-1, CH-2 Better than 56dB (from 3% distortion level) CH-3 Better than 50dB (from 3% distortion level)
	Distortion (at 1kHz)	CH-1, CH-2 & CH-3 Less than 1% (at operating level)	CH-1, CH-2, CH-3 Less than 1% (at operating level)	CH-1, CH-2, CH-3 Less than 1% (at operating level)
	Wow & flutter	Less than 0.1% (0.5 - 200Hz NAB unweighted)	Less than 0.1% (CCIR weighted)	Less than 0.1% (0.5 - 200Hz NAB unweighted)
	Crosstalk (at 1kHz)	Between any two channels Less than -60dB	Between any channels Less than -60dB	Between any two channels Less than -60dB

1-INCH VIDEO TAPE RECORDERS

1-inch VTR

BVH-2000/2000PS/2000PM

(NTSC)

(PAL/SECAM)

(PAL-M)



Control panel and side panels are optional

BVH-2000

- Plug-in TBC (option)
 - 1Hp-p window correction
Recognizable B/W picture at up to ± 50 times normal speed (with BKH-2100/2300/2400)
 - For DT playback from -1 to $+3$ times normal speed
15Hp-p window correction
Recognizable color picture at up to ± 8 times normal speed (with BKH-2150/2350/2450)
- High-speed Dynamic Tracking System
 - Wide DT range from -1 to $+3$ times normal speed
 - Programmed play
 - DT variable memory function
- Easy Threading
 - New head gate system with precise cross roller guide
- Three types of control panel (option)
- Two-hour recording and playback
- Plug-in time code board (option)
- Full scale editing facility
- Versatile system interface
- Front operation and improved serviceability
- Compact and lightweight
- Audio Ch-4 capability (PS model only)
- Self diagnostic system

Supplied accessories

50-pin connector for REMOTE OUT-3
37-pin connector for MONITOR SELECT
Empty reel
Extension board
Phone plug adaptor
Operation and maintenance manual

1-inch VTR, 3-hour Operation

BVH-2180/2180PS/2180PM

(NTSC)

(PAL/SECAM)

(PAL-M)



Control panel and side panels are optional

BVH-2180

- New tape transport with three-hour recording and playback capability
- Plug-in TBC (option)
 - 1Hp-p window correction
Recognizable B/W picture at up to ± 50 times normal speed (with BKH-2100/2300/2400)
 - For DT playback from -1 to $+3$ times normal speed
15Hp-p window correction
Recognizable color picture at up to ± 8 times normal speed (with BKH-2150/2350/2450)
- High-speed Dynamic Tracking System
Wide DT range from -1 to $+3$ times normal speed
Programmed play
DT variable memory function
- Easy Threading
New head gate system with precise cross roller

guide

- Three types of control panel (option)
- Plug-in time code board (option)
- Full scale editing facility
- Versatile system interface
- Front operation and improved serviceability
- Compact and lightweight
- Audio Ch-4 capability (BVH-2180PS only)
- Self diagnostic system

Supplied accessories

50-pin connector for REMOTE OUT-3
37-pin connector for MONITOR SELECT
Empty reel
Extension board
Phone plug adaptor
Operation and maintenance manual

1-INCH VIDEO TAPE RECORDERS

BVH-2000/2180 SERIES SPECIFICATIONS

		BVH-2000/2180	BVH-2000PS/2180PS	BVH-2000PM/2180PM
General	Power requirements	AC 100 - 120V $\pm 10\%$	AC 100/120/220/240V $\pm 10\%$	AC 100/120/220/240V $\pm 10\%$
	Power consumption	550W max (BVH-2000), 600W (BVH-2180)	550W max (BVH-2000), 600W (BVH-2180)	550W max (BVH-2000), 600W (BVH-2180)
	Operating temperature	5°C to 40°C (41°F to 104°F)	5°C to 40°C (41°F to 104°F)	5°C to 40°C (41°F to 104°F)
	Humidity	10% to 90% RH (non-condensing)	10% to 90% RH (non-condensing)	10% to 90% RH (non-condensing)
	Weight	70 kg (155 lb, BVH-2000) 77 kg (170 lb, BVH-2180)	70 kg (155 lb, BVH-2000) 77 kg (170 lb, BVH-2180)	70 kg (155 lb, BVH-2000) 77 kg (170 lb, BVH-2180)
	Dimensions (including handle & foot)	570(W) $\times$ 680(H) $\times$ 588mm(D) (22.5 $\times$ 26.8 $\times$ 23.2") (BVH-2000) 623(W) $\times$ 715(H) $\times$ 572mm(D) (24.5 $\times$ 28.2 $\times$ 22.5") (BVH-2180)	570(W) $\times$ 680(H) $\times$ 588mm(D) (22.5 $\times$ 26.8 $\times$ 23.2") (BVH-2000) 623(W) $\times$ 715(H) $\times$ 572mm(D) (24.5 $\times$ 28.2 $\times$ 22.5") (BVH-2180)	570(W) $\times$ 680(H) $\times$ 588mm(D) (22.5 $\times$ 26.8 $\times$ 23.2") (BVH-2000) 623(W) $\times$ 715(H) $\times$ 572mm(D) (24.5 $\times$ 28.2 $\times$ 22.5") (BVH-2180)
	Recording system	High Band FM Recording	High Band FM Recording	High Band FM Recording
	Recording heads	1.5-Head System 1 head for Video track, 1 head for Sync track	1.5-Head System 1 head for Video track, 1 head for Sync track	1.5-Head System 1 head for Video track, 1 head for Sync track
	Track	1 Video track/1 Sync track/2 Audio tracks/ 1 Time code or cue track (Audio-3)/ 1 Control track	1 Video track/1 Sync track/3 Audio tracks (one track, option)/1 Time code or cue track (Audio-3)/1 Control track	1 Video track/1 Sync track/2 Audio tracks/ 1 Time code or cue track (Audio-3) 1 Control track
	Tape speed	24.4cm/sec	23.98cm/sec	24.4cm/sec
	Writing speed (Relative speed)	25.59m/sec	21.39m/sec	25.59m/sec
	Recording time	126min. with 11.75-inch reel (BVH-2000) 188 min. with 14-inch reel (BVH-2180)	128min. with 11.75-inch reel (BVH-2000) 191 min. with 14-inch reel (BVH-2180)	126min. with 11.75-inch reel (BVH-2000) 188 min. with 14-inch reel (BVH-2180)
	Time base stability	Within 3 μ sec p-p	Within 3 μ sec p-p	Within 3 μ sec p-p
	Servo lock time	Approx. 2 sec (with frame capstan servo mode from standby mode)	Approx. 3 sec (with 4-field lock mode from standby mode)	Approx. 3 sec (with 4-field lock mode from standby mode)
	Tape timer accuracy	± 1 frame (with continuous control track)	± 1 frame (with continuous control track)	± 1 frame (with continuous control track)
	Fast forward/Rewind time (Transfer time)	Within 110 sec (with 1 hour tape)	Within 110 sec (with 1 hour tape)	Within 110 sec (with 1 hour tape)
	Recommended tapes	Sony's 1-inch High Density Tape or equivalent	Sony's 1-inch High Density Tape or equivalent	Sony's 1-inch High Density Tape or equivalent
	Reel size	NAB Standard (Max. 11.75-inch type, BVH-2000) (Max. 14-inch type, BVH-2180)	NAB Standard (Max. 11.75-inch type, BVH-2000) (Max. 14-inch type, BVH-2180)	NAB Standard (Max. 11.75-inch type, BVH-2000) (Max. 14-inch type, BVH-2180)
Video	Video band width	Flat to 4.2MHz: ± 0.5 dB 4.5MHz: -3 dB	Flat to 5MHz: ± 0.5 dB 5.5MHz: -3 dB	Flat to 4.2MHz: ± 0.5 dB 4.5MHz: -3 dB
	S/N ratio	Better than 48dB (unweighted), self recording Better than 47dB (unweighted), interchanged base [peak-peak composite video to rms noise measured with a Rohde & Schwarz noise meter]	Better than 44dB (unweighted), self recording Better than 43dB (unweighted), interchanged base [peak-peak composite video to rms noise measured with a Rohde & Schwarz noise meter]	Better than 48dB (unweighted), self recording Better than 47dB (unweighted), interchanged base [peak-peak composite video to rms noise measured with a Rohde & Schwarz noise meter]
	Differential gain	Less than 4% (with Sony TBC)	Less than 4% (with Sony TBC)	Less than 4% (with Sony TBC)
	Differential phase	Less than 4° (with Sony TBC)	Less than 4° (with Sony TBC)	Less than 4° (with Sony TBC)
	Transient response	Less than 1	Less than 1	Less than 1
	"K" factor (2T pulse) Tilt (Hor. & Vert.)	Less than 1%	Less than 1%	Less than 1%
	Moire	Less than -40 dB (75% Color Bars)	Less than -35 dB (75% Color Bars)	Less than -40 dB (75% Color Bars)
	Chrominance/Luminance delay	Less than 20 n sec	Less than 25 n sec	Less than 20 n sec
	Low frequency linearity	Less than 0.98	Less than 0.98	Less than 0.98
Audio	Audio frequency response	CH-1, CH-2 & CH-3 50Hz - 15kHz/ $\pm \frac{1}{2}$ dB 200Hz - 7.5kHz/ ± 1.0 dB	CH-1, CH-2, CH-3 & CH-4 (option) 50Hz - 15kHz/ $\pm \frac{1}{2}$ dB 200Hz - 7.5kHz/ ± 1.0 dB	CH-1, CH-2 & CH-3 50Hz - 15kHz/ $\pm \frac{1}{2}$ dB 200Hz - 7.5kHz/ ± 1.0 dB
	S/N ratio	CH-1 & CH-2 Better than 56dB (from 3% distortion level) CH-3 Better than 50dB (from 3% distortion level)	CH-1, CH-2 & CH-4 (option) Better than 56dB (from 3% distortion level) CH-3 Better than 56dB (from 3% distortion level)	CH-1 & CH-2 Better than 56dB (from 3% distortion level) CH-3 Better than 50dB (from 3% distortion level)
	Distortion (at 1kHz)	CH-1, CH-2 & CH-3 Less than 1% (at operating level)	CH-1, CH-2, CH-3 & CH-4 (option for BVH-2000PS) Less than 1% (at operating level)	CH-1, CH-2 & CH-3 Less than 1% (at operating level)
	Wow & flutter	Less than 0.1% (0.5 - 200Hz NAB unweighted)	Less than 0.1% (OCIR weighted)	Less than 0.1% (0.5 - 200Hz NAB unweighted)
	Crosstalk (at 1kHz)	Between any two channels Less than -60 dB	Between any channels Less than -60 dB	Between any two channels Less than -60 dB

Portable 1-inch VTR

BVH-500A/500APS/500APM

(NTSC)

(PAL/SECAM)

(PAL-M)



- Compact and lightweight
- Back space assemble edit with ON/OFF switch
- Digital servo system
- Electric tension servo system
- Advanced gyro/rolling characteristics
- New color framing facility
- Warning indicators
- Reel size selector
- 60 minutes recording/playback
- Dust and weather-proof housing
- Low power consumption

Supplied accessories

Empty reel

CCQ-2AR

Operation and maintenance manual

SPECIFICATIONS

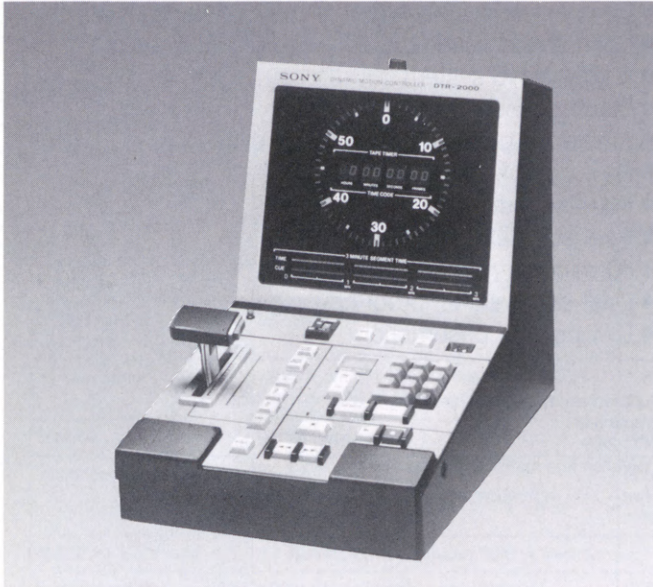
		BVH-500A	BVH-500APS	BVH-500APM
General	Power requirements	DC 12V	DC 12V	DC 12V
	Power consumption	60W	60W	60W
	Operating temperature	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)
	Humidity	10% to 90% (non-condensing)	10% to 90% (non-condensing)	10% to 90% (non-condensing)
	Dimensions			
	mm (inch)			
	Width	380 (15")	380 (15")	380 (15")
	height	178 (7")	178 (7")	178 (7")
	depth	420 (16.5")	420 (16.5")	420 (16.5")
	Weight	Approx. 16 kg (35 lb)	Approx. 16 kg (35 lb)	Approx. 16 kg (35 lb)
Video	Tape speed	24.4cm/sec	23.98cm/sec	24.4cm/sec
	Writing speed (relative speed)	25.59m/sec	21.39m/sec	25.59m/sec
	Recording/playback time	62 min. (with 9-inch reel)	63 min. (with 9-inch reel)	62 min. (with 9-inch reel)
	REW time	Approx. 5 min. (with 9-inch reel)	Approx. 5 min. (with 9-inch reel)	Approx. 5 min. (with 9-inch reel)
	Lock-up time	Less than 3 sec. (standby mode)	Less than 3.5 sec. (standby mode)	Less than 3.5 sec. (standby mode)
	* Bandwidth	4.2MHz ± 0.5 dB	5.5MHz ± 0.5 dB, 6MHz - 3dB	4.2MHz ± 0.5 dB
	* S/N ratio	Better than 47dB	Better than 43dB	Better than 47dB
	* Differential gain	Less than 4%	Less than 4%	Less than 4%
	* Differential phase	Less than 4°	Less than 4°	Less than 4°
	* Transient response	Less than 1% (2T pulse)	Less than 1% (2T pulse)	Less than 1% (2T pulse)
Audio	* Moire	Less than -40 dB (75% color bar)	Less than -35dB (75% color bar)	Less than -40dB (75% color bar)
	* Chrominance delay	Less than 25 n sec.	Less than 25 n sec.	Less than 25 n sec.
	* Frequency response	50Hz to 15kHz ± 1.5 dB (CH-1/2/3)	50Hz to 15kHz ± 1.5 dB (CH-1/2/3)	50Hz to 15kHz ± 1.5 dB (CH-1/2/3)
	* S/N ratio (at 3% distortion level)	Better than 56dB (CH-1/2) Better than 50dB (CH-3)	Better than 56dB (CH-1/2) Better than 50dB (CH-3)	Better than 56dB (CH-1/2) Better than 50dB (CH-3)
	* Distortion	Less than 1.2% (at operating level)	Less than 1.2% (at operating level)	Less than 1.2% (at operating level)
	Crosstalk	Less than -60dB (at 1kHz)	Less than -60dB (at 1kHz)	Less than -60dB (at 1kHz)
	Wow and flutter	Less than 0.12% rms (NAB unweighed)	Less than 0.12% rms	Less than 0.12% rms (NAB unweighed)

* Playback with BVH-2000/2180/2500 series

1-INCH VIDEO TAPE RECORDERS

Dynamic Motion Controller

DTR-2000



- Five random access cue markers, expandable up to 150 events
- Time code or tape time clock drives with 7 digit display
- Variable preroll, 0 to 9.9 secs or 0 to 99 secs
- RS-422 plug compatibility with BVH-2000series and BVU-820series
- Search to cue number or time code address
- Continuously variable playback speed from $-1/5$ to $+2$ times normal on BVH-1100series and -1 to $+3$ times normal on BVH-2000series and BVU-820series
- Remote operation up to 200m (656 ft) from VTR
- Built-in diagnostic routines
- Multi-standard operation; NTSC, PAL, SECAM, PAL-M

Specifications

Power requirements:	AC 100 to 250V $\pm 10\%$ (selectable), 50/60Hz, 40W
Dimensions:	317(W) $\times$ 257(H) $\times$ 454mm(D) (12.5 $\times$ 10 $\times$ 17.9")
Weight:	11.8 kg (26 lb)
Environmental conditions:	0°C to 40°C (32°F to 104°F) 25 to 90% RH (non-condensing)
Operating standards:	60/525 NTSC, 50/625 PAL, 60/525 PAL-M, 50/625 SECAM

Optional accessories

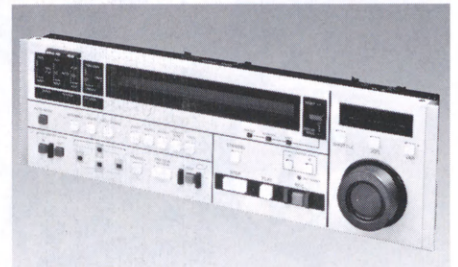
- BKD-2901: CCJ interface remote adaptor for BVH-1100/1100A/1180 series VTRs.
- BKD-2902: Cue marker expansion memory, up to 150 events.
- BKD-2903: Cue address read/write function at head end of tape.

BVH-2000/2180/2500/2800/ 2830 SERIES OPTIONAL ACCESSORIES

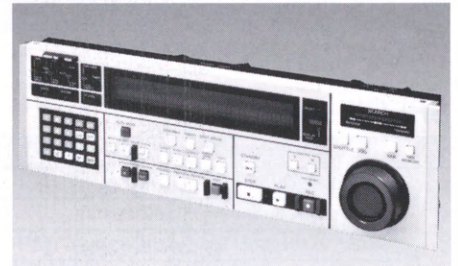
Control Panel Type-I
BKH-2011



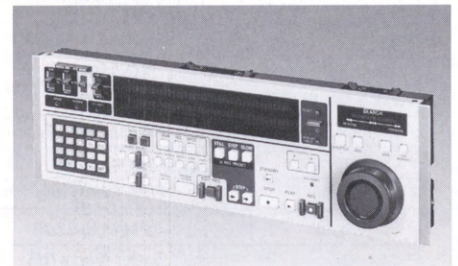
Control Panel Type-II
BKH-2012



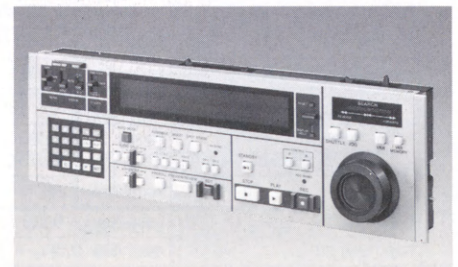
Control Panel Type-III
BKH-2013



Control Panel for BVH-2500
BKH-2501



Control Panel for BVH-2800/2830
BKH-2802





VIDEOCODER

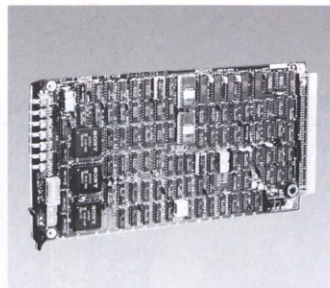
Side Panel

BKH-2014 (for BVH-2000/2500/2800)
BKH-2019 (for BVH-2180/2830)



BKH-2014

Plug-in Time Code Board
BKH-2015A



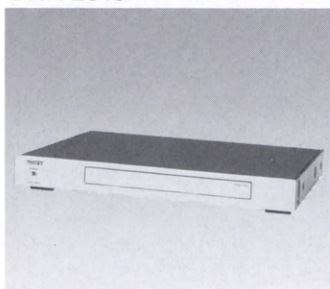
CCJ Converter
BKH-2016



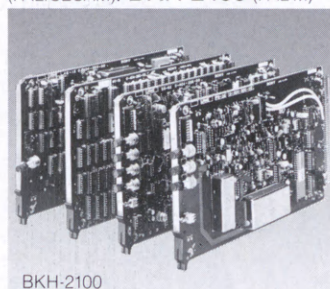
Remote Control Panel Adaptor Box
BKH-2017A



9-pin—CCJ Converter
BKH-2018

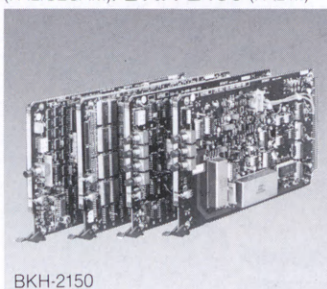


Plug-in TBC for BVH-2000/2180/2800/2830
BKH-2100 (NTSC)/**BKH-2300**
(PAL/SECAM)/**BKH-2400** (PAL-M)



BKH-2100

Plug-in TBC for BVH-2000/2180/2800/2830
BKH-2150 (NTSC)/**BKH-2350**
(PAL/SECAM)/**BKH-2450** (PAL-M)



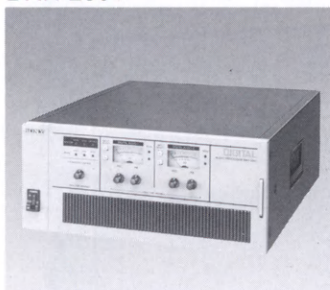
BKH-2150

TBC Remote Control Unit
BK-2006 (NTSC)/**BK-2007** (PAL)/
BK-2008 (PAL-M)

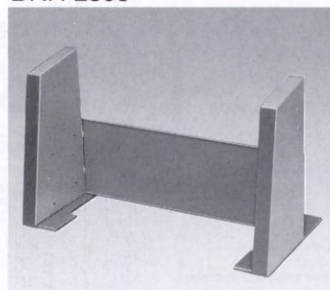


BK-2006

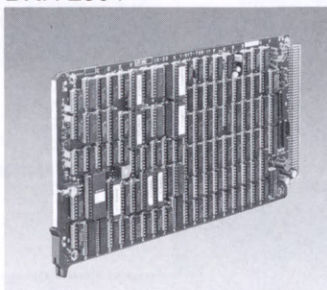
PCM Audio Processor for
BVH-2800/2830
BKH-2801



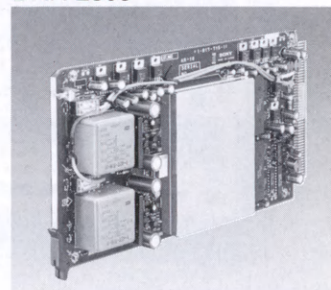
Mount Adaptor for BKH-2801
BKH-2803



Digital Audio I/O Interface for
BVH-2800/2830
BKH-2804



Audio D/A Converter for BVH-2800/2830
BKH-2805



BVH-500A/500APS/500APM OPTIONAL ACCESSORIES

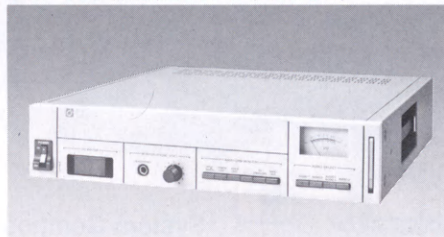
Function Remote Control
BVR-500



Specifications

Dimensions: 199(W) × 33(H) × 50mm(D)
(7.83 × 1.30 × 1.97")
Weight: 650 g (1 lb 7 oz)
Cable length: 3m (9.8 ft)

Color Playback Adaptor (used with a TBC)
CLP-550 (NTSC)/**550PS** (PAL/SECAM)



Specifications

Power requirements: AC 100V/120V/240V ± 10%,
50/60Hz selectable
Power consumption: 40W max.
Dimensions: 424(W) × 100(H) × 462mm(D)
(1.67 × 3.94 × 18.2")
Weight: 13 kg (28 lb 10 oz)

Color Stabilizer
HT-500A (NTSC)

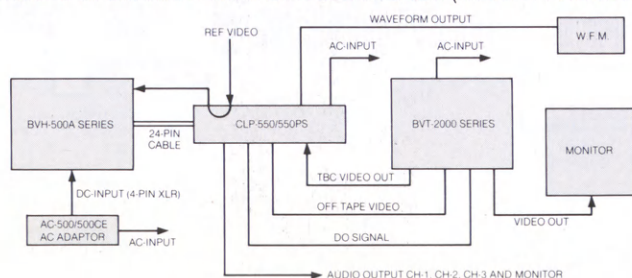


Specifications

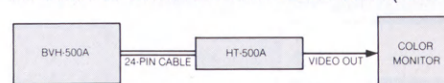
Power requirement: DC 12V
Power consumption: 2.5W
Dimensions: 333(W) × 208(H) × 61mm(D)
(13.1 × 8.2 × 2.4")
Weight: 1.65 kg (3 lb 10 oz)

TYPICAL CONNECTIONS

CLP-550/550PS OPERATION WITH BVH-500A SERIES (NTSC or PAL/SECAM)



HT-500A OPERATION WITH BVH-500A (NTSC)



* 12V DC POWER IS SUPPLIED FROM BVH-500A VTR

(NTSC SYSTEM ONLY)



- New recording technology enables perfect slow motion playback at 1/3 normal speed.
- High performance slow motion playback from freeze to normal speed.
- Compatible with type-C format VTR playback and NTSC video system.
- Expands the current video production versatility
- The latest signal processing and advanced recording technology.

System Composition

BVP-3000: Video Camera with 3-tube (Plumbicon)
 OCU-3000: Operational Control Unit
 DPU-3000: Digital Processing Unit
 PSU-3000: Power Supply Unit
 RCP-3000: Remote Control Panel
 BVH-2700: 1-inch VTR
 BVT-2700: Time Base Corrector

SUPER MOTION VIDEO SYSTEM SPECIFICATIONS

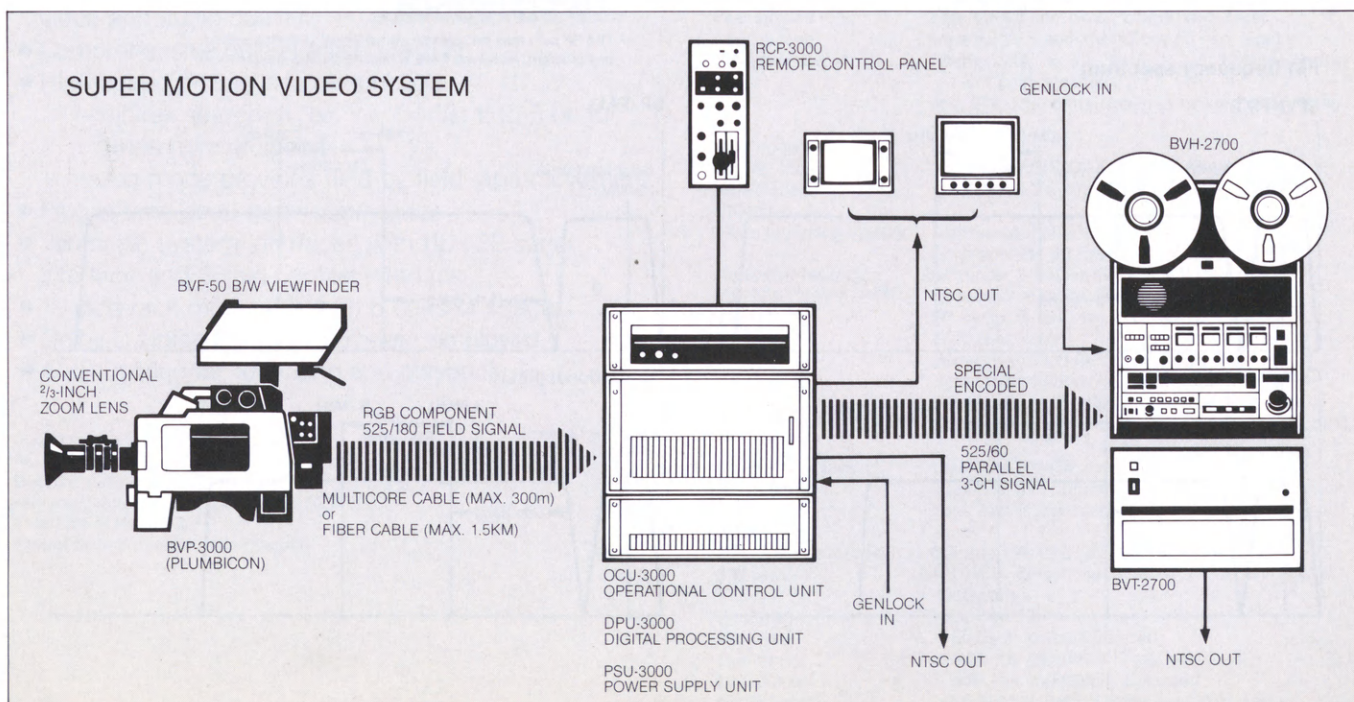
SUPER MOTION CAMERA SYSTEM (NTSC)

GENERAL	
Power requirements:	AC100 to 120V/200 to 240V $\pm 10\%$, 50/60 Hz
Power consumption:	350W max.
Weight/Dimensions:	BVP-3000 Approx. 5.2 kg (11 lb 7 oz) DPU-3000 (digital processor unit) Approx. 32.0 kg (70 lb 9 oz) 53.5 kg (117 lb 15 oz)* Approx. 424(W) $\times$ 267(H) $\times$ 486mm(D) 513(W) $\times$ 317(H) $\times$ 655mm(D)* OCU-3000 (operational control unit) Approx. 12.4 kg (27 lb 5 oz) 25.9 kg (58 lb)* Approx. 424(W) $\times$ 133(H) $\times$ 415mm(D) 513(W) $\times$ 184(H) $\times$ 655mm(D)* PSU-3000 (power supply unit) Approx. 13.1 kg (28 lb 14 oz) 31.2 kg (68 lb 12 oz)* Approx. 424(W) $\times$ 133(H) $\times$ 432mm(D) 513(W) $\times$ 184(H) $\times$ 655mm(D)*
Pickup tube:	$\frac{2}{3}$ -inch MS Plumbicon
Prism:	F1.4 high index
Output:	VTR 11-pin multicore cable NTSC 2-channel (BNC) Monitor 1-channel (BNC) (Selectable R, B, G, -G, CH1, CH2, CH3 or ENC)
Input:	Gen lock signal Black Burst (BNC) Return video VBS 1 channel (BNC) Tally 2-channel Intercom 1-channel Program audio
PERFORMANCE	
S/N ratio:	50dB
Sensitivity:	2000 lux at F4.7 (PbO) at 90% reflectance
Registration:	Less than 0.1% (zone 1) Less than 0.2% (zone 2) Less than 0.4% (zone 3)
Auto functions:	Automatic white/black balance Automatic Beam Optimizer (ABO) Automatic centering Automatic iris
Maximum cable length:	300m (multicore) or 1.5km (fiber cable)

BVH-2700/BVT-2700 (NTSC)

GENERAL	
Power requirements:	AC100 to 120V $\pm 10\%$, 50/60 Hz
Power consumption:	BVH-2700 550W max. BVT-2700 620W max.
Weight/Dimensions:	BVH-2700 Approx. 75 kg (165 lb 6 oz) Approx. 570(W) $\times$ 680(H) $\times$ 588mm(D) BVT-2700 Approx. 40 kg (88 lb 3 oz) Approx. 424(W) $\times$ 265(H) $\times$ 586mm(D)
Tape speed:	73.2cm/sec. Recording mode 24.4cm/sec. Playback mode
Recording time:	42 minutes for 11.75-inch reel
Time base stability:	Less than 3 μ sec p-p
Servo lock time:	Less than 3 seconds (from standby mode to frame capstan servo lock.)
Tape timer accuracy:	± 1 frame (CTL pulse correction)
Recommended reels:	NAB standard 6.5 to 11.75-inch
VIDEO (AT $\frac{1}{3}$ NORMAL SPEED PLAYBACK MODE)	
Band width:	Flat to 4.2MHz; ± 0.7 dB 4.5MHz; -3dB
S/N ratio:	Better than 46dB (unweighted, interchanged base)
D.G.:	Less than 6% (with BVT-2700)
D.P.:	Less than 6° (with BVT-2700)
Transient response "K-factor"	Less than 2% (2T pulse)
AUDIO (AT NORMAL SPEED PLAYBACK MODE)	
Frequency response in normal playback:	70Hz to 15kHz ± 1.5 dB 200Hz to 10kHz ± 1.0 dB
S/N ratio:	CH-1 & CH-2; 56dB CH-3; 50dB
Distortion:	CH-1, CH-2 & CH-3; Less than 1%

* Including the carrying case



U-matic SP VIDEOCASSETTE RECORDERS

Concept of Superior Performance U-matics

The SP BVU is the result of continued development of the established U-matic format, incorporating recent technology in recording tape to provide considerable advantages, both in operations and in terms of technical performance.

- SP mode for the highest possible performance
- Conventional BVU mode with improved performance

SP mode recording on the SP U-matic is activated by an SP tape cassette, and SP mode playback is activated by FM carrier detection. In addition, full interchangeability among conventional Sony BVU series U-matic VTRs is maintained.

SP mode recording and playback

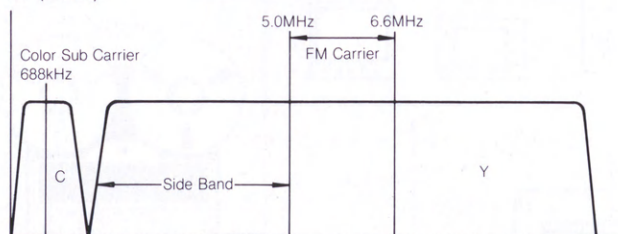
- Increases the FM carrier frequency (luminance +1.2MHz/NTSC, luminance +0.8MHz/PAL) while maintaining interchangeability.
- Switch video circuits optimized for SP tape and SP FM carrier
 - Filters
 - Video equalizer
 - RF equalizer
- Switch audio bias optimized for SP tape

General improvements of SP U-matic

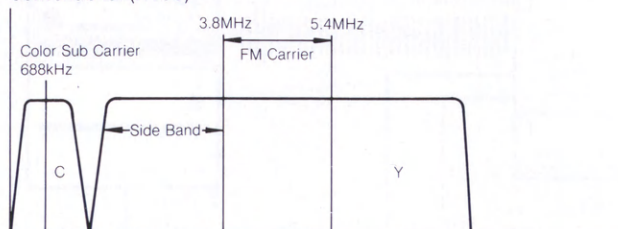
- New Y/C separator for higher resolution and better ringing.
- General circuit improvements such as filters, CCD based DOC, high speed automatic chroma controller, and chroma enhancer.
- New noise canceller circuits for improved K-factor
- New sendust audio head
- Type-C Dolby Noise Reduction System (selectable) and automatic detector
- Precision of audio editing point

FM frequency spectrum

SP (NTSC)



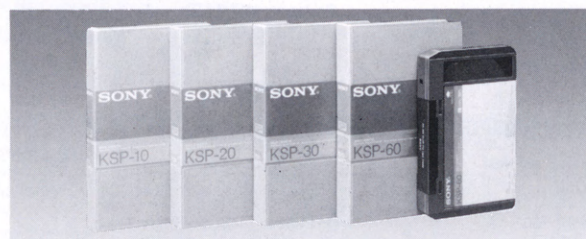
Conventional (NTSC)



New SP tapes



KSP-S10/S20



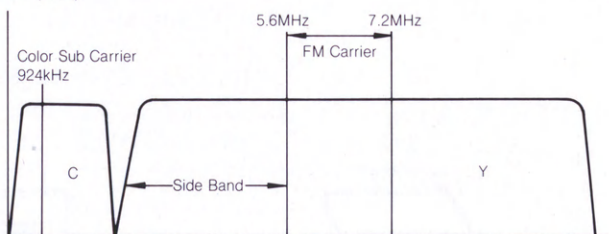
KSP-10/20/30/60



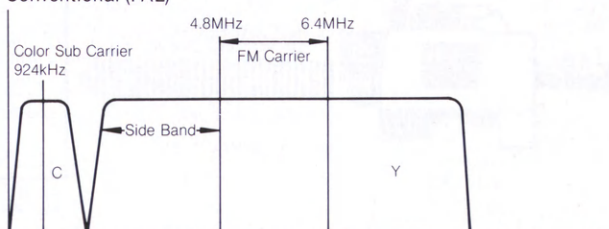
Detection holes

* The SP tape may be used on conventional U-matics without any problem. However, there is no video/audio improvement

SP (PAL)



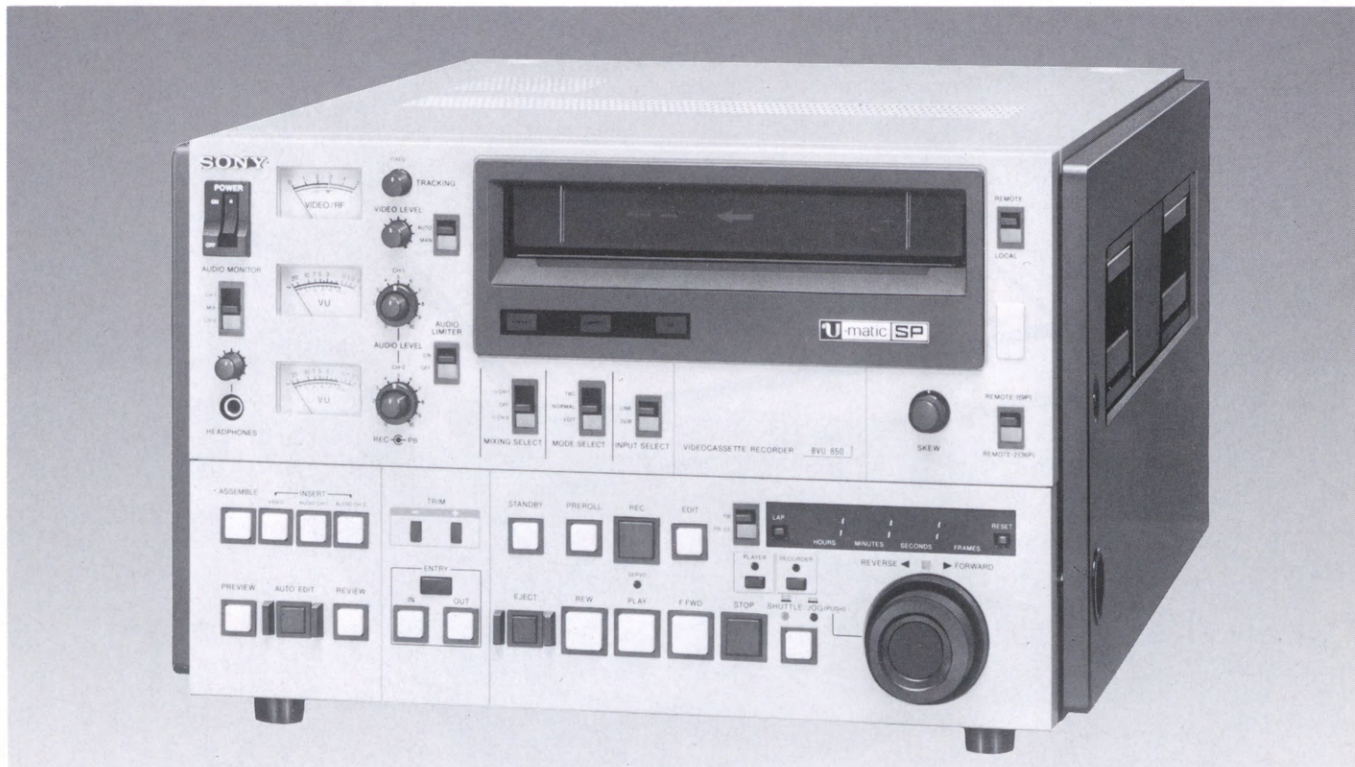
Conventional (PAL)



Superior Performance Videocassette Recorder

BVU-850/850P

(NTSC) (PAL)



- Two modes of record/replay: SP U-matic mode and conventional U-matic mode, and all equivalent BVU-800 functions
- Improved picture quality resulting from the new Y/C separator, chroma enhancer, and noise canceller
- New SP tape activates SP mode for highest possible video and audio quality
- Comprehensive built-in editing facility
- High speed picture search function
 - Bidirex search at $1/30$, $1/10$, $1/5$, $1/2$, 1, 2, 5 or 10 times normal speed
 - Jog mode provides field by field tape movement
- Plug-in time code generator/reader
- Versatile system interfaces with RS-422 serial interface and 36-pin parallel interface
- 19-inch rack mountable with 6 units of space
- Dolby C Noise Reduction System employed
- Audio mixing for recording and playback

Supplied accessories

AC power cord
Dubbing cable VDC-5 (5m)
Remote control cable (9-pin—9-pin) RCC-5G
Extension board EX-7
Operation and maintenance manual

Provisional Specifications

GENERAL

Dimensions: Approx. 454(W) × 283(H) × 550mm(D)
(17.9 × 11.1 × 21.7")

Weight: Approx. 39 kg (86 lb)

Power requirements: AC 100/120/220/240V ± 10% (selectable), 48 to 64Hz

Power consumption: 190W

Operating temperature: +5°C to +40°C (41°F to 104°F)

Storage temperature: -20°C to +60°C (-4°F to 140°F)

Fast forward time: Less than 4 min. (with Sony 60 min. tape)

Rewind time: Less than 2.5 min. (with Sony 60 min. tape)

Search speed: Shuttle: Still, $1/30$, $1/10$, $1/5$, $1/2$, 1, 2, 5, 10 times normal in both directions

Jog: STILL to normal speed in forward and reverse directions

Tape speed: 9.53cm/sec

Writing speed: 10.26cm/sec (NTSC), 8.54cm/sec (PAL)

Wow/flutter: Less than 0.2% rms (NTSC), 0.25% DIN (PAL)

VIDEO

Video recording system: Luminance: FM
Chrominance: SC low-range conversion

Horizontal resolution: SP mode: 340 lines (NTSC), 300 lines (PAL)
Conventional mode: 260 lines

S/N ratio: SP mode: Better than 47dB (NTSC color), 46dB (PAL color)
Better than 50dB (NTSC, Y), 49dB (PAL, Y)
Better than 48dB (NTSC, AM), 46dB (PAL, AM)
Better than 41dB (NTSC, PM), 41dB (PAL, PM)
Conventional mode: Better than 47dB (NTSC, color), 46dB (PAL, color)

K-factor (2T pulse): Less than 3% (SP mode)

DG: Less than 3% (SP mode)

DP: Less than 3° (SP mode)

AUDIO

Frequency response: 50Hz to 15kHz ± 3dB (SP mode)
SP mode: Better than 52dB at 3% distortion level (Dolby off)

S/N ratio: Less than 2%

Distortion: -60dB, 3k ohms, balanced

Mic input: +4dB, 10k ohms/600 ohms, balanced

Line output: +4dB, low impedance, balanced

Headphone: -46dB to -26dB, 8 ohms load, binaural

U-matic SP VIDEOCASSETTE RECORDERS

Superior Performance Portable U-matic Videocassette Recorder

BVU-150/150P

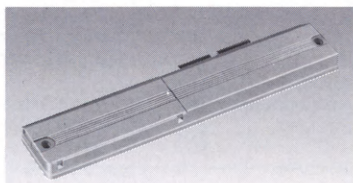
(NTSC) (PAL)



- Two modes of record/replay: SP U-matic mode and conventional U-matic mode, retaining all the features and functions of the BVU-110/110P
- Compact, lightweight, and rugged design
- Improved picture quality employing new Y/C separator, chroma enhancer, and noise canceller, etc.
- New SP tape activates SP mode for the highest possible video and audio quality
- Integral Time Code Generator, BKU-150/150P
- Video confidence playback
- Back space editing capability
- External Time Base Corrector facility
- Dolby C Noise Reduction System employed
- Audio mixing for recording and playback
- Status and malfunction indicators

Supplied accessories

Carrying case
Shoulder strap
Carrying handle
Carrying strap
Level control knob



Time Code Generator

BKU-150/150P (optional)

Weight: 120 g
Dimensions: Approx. 196(W) × 37(H) × 16mm(D)
Power consumption: Less than 50mW

Provisional Specifications

GENERAL

Dimensions:	Approx. 263(W) × 139(H) × 355mm(D) (10.3 × 5.5 × 14.0")
Weight:	Approx. 6.8 kg (15 lb)
Power requirements:	DC 11 to 14V (NiCd battery pack BP-90 used) AC operation with AC adaptor AC-500 (optional) Less than 23W
Power consumption:	Less than 23W
Operating temperature:	0°C to +40°C (32°F to 104°F)
Storage temperature:	-20°C to +60°C (-4°F to 140°F)
Fast forward time:	Less than 3 min. (with Sony 20 min. tape)
Rewind time:	Less than 3 min. (with Sony 20 min. tape)
Tape speed:	9.53cm/sec
Writing speed:	10.26m/sec (NTSC), 8.54m/sec (PAL)
Wow/flutter:	Less than 0.2% rms (NTSC), 0.2% DIN (PAL)
VIDEO	
Video recording system:	Luminance; FM Chrominance; SC low-range conversion
Horizontal resolution:	SP mode; 340 lines (NTSC), 300 lines (PAL)
(monochrome/color mode)	Conventional mode; 260 lines
S/N ratio:	SP mode; Better than 46dB (NTSC color), 45dB (PAL color) Conventional mode; Better than 46dB (NTSC, color), 45dB (PAL, color)
K-factor (2T pluse):	Less than 3% (SP mode)

AUDIO

Frequency response:	SP mode; 50Hz to 15kHz ±3dB Conventional mode; 50Hz to 15kHz ±4dB
S/N ratio:	SP mode; Better than 52dB at 3% distortion level (Dolby off)
Distortion:	Less than 2.0%
Mic input:	CH-1 -60dB, 3k ohms balanced CH-2 -20/-60dB selectable, 3k ohms balanced +4dB, 10k ohms, balanced
Line input:	+4dB, low impedance, balanced
Earphone:	-33dB to -20dB, 8 ohms load, binaural

U-matic VIDEOCASSETTE RECORDERS

U-matic Videocassette Recorder with Dynamic Tracking

BVU-820/820P/820S/820PM

(NTSC)

(PAL)

(SECAM)

(PAL-M)



- Dynamic tracking playback, from -1 to +3 times normal speed
- Video confidence, simultaneous playback function
- Front loading cassette
- Bidirex search function from 1/30 to 10 times playback speed
- Fast forward and rewind up to 40 times playback speed
- Full feature jog capability
- Built-in full scale editing function
- Digital time counter
- Fully 19-inch EIA standard rack mountable
- Multi-position, removable control panel
- Time code recording/playback function
- Direct drive system with six DC motors
- Built-in 2-channel audio mixing facility

Supplied accessories

- AC power cord
- Dubbing cable VDC-5 (5m)
- Remote control cable (9-pin—9-pin) RCC-5G
- Extension board EX-7
- Operation and maintenance manual

U-matic VIDEOCASSETTE RECORDERS

U-matic Videocassette Recorder

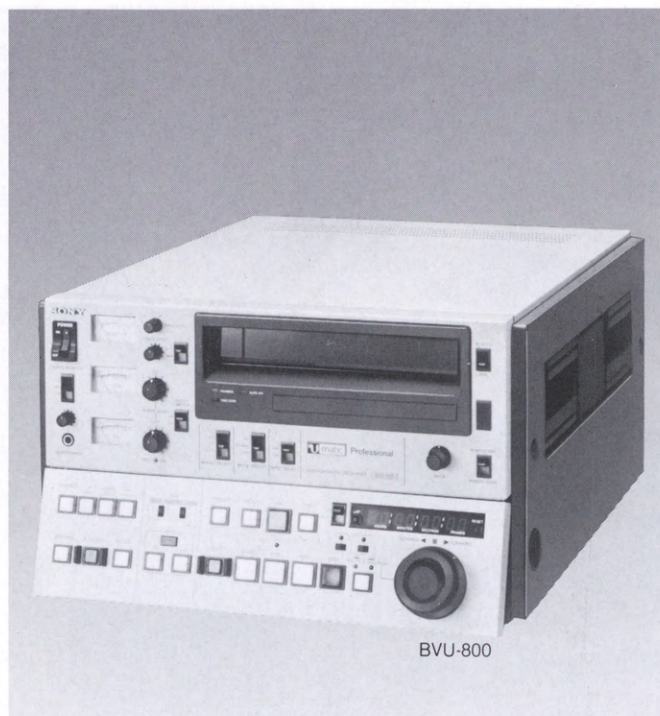
BVU-800/800P/800S/800PM

(NTSC)

(PAL)

(SECAM)

(PAL-M)

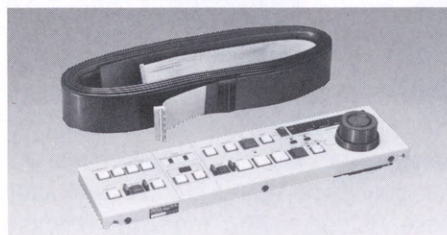


- Front loading cassette
- Bidirex search function from $\frac{1}{30}$ to 10 times playback speed
- Fast forward and rewind up to 40 times playback speed
- Full feature jog capability
- Built-in full scale editing function
- Digital time counter
- Fully 19-inch EIA standard rack mountable
- Multi-position, removable control panel
- Time code recording/playback function
- Direct drive system with six DC motors
- Built-in 2 channel audio mixing facility

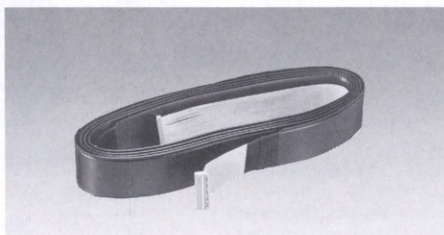
Supplied accessories

AC power cord
Dubbing cable VDC-5 (5m)
Remote control cable (9-pin—9-pin) RCC-5G
Extension board EX-7
Operation and maintenance manual

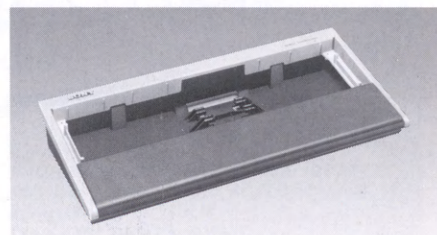
BVU-800/820/850 SERIES OPTIONAL ACCESSORIES



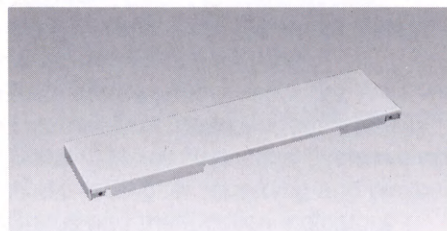
Control Panel (with 40-pin/5m cable)
BK-801



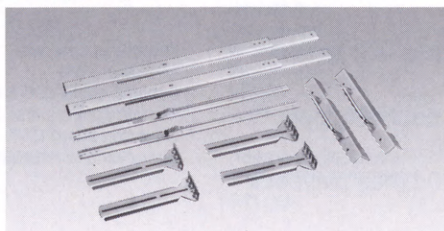
40-pin Flat Cable
BK-802



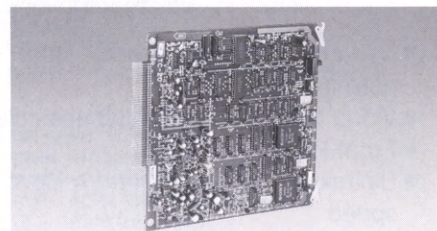
Control Panel Case
BK-803



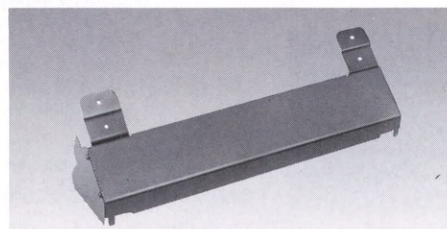
Blank Panel
BK-804



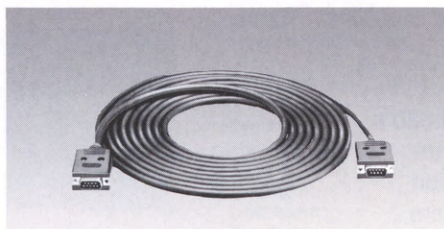
Rack Mount Kit
BK-805



Time Code Generator/Reader Board
BK-806



Function Panel Rear Cover
BK-811



9-pin Remote Control Cable
RCC-5G/10G/30G



7-pin Dubbing Cable
VDC-5

BVU-820 SERIES SPECIFICATIONS

		BVU-820/820PM	BVU-820P	BVU-820S
General	Dimensions width mm (inch) height depth	454 (17.8") 283 (11.1") 550 (21.7")	454 (17.8") 283 (11.1") 550 (21.7")	454 (17.8") 283 (11.1") 550 (21.7")
	Weight	38 kg (83 lb 12 oz)	38 kg (83 lb 12 oz)	38 kg (83 lb 12 oz)
	Power requirements	AC 100/120/220/240V $\pm 10\%$ selectable, 48 to 64Hz		
	Power consumption	150W	170W	170W
	Operating temperature	5°C to 40°C (41°F to 104°F)	5°C to 40°C (41°F to 104°F)	5°C to 40°C (41°F to 104°F)
	Storage temperature	−20°C to 60°C (−4°F to 140°F)	−20°C to 60°C (−4°F to 140°F)	−20°C to 60°C (−4°F to 140°F)
	Fast forward time with KCA-60	Less than 4 min.	Less than 4 min.	Less than 4 min.
	Rewind time with KCA-60	Less than 2.5 min.	Less than 2.5 min.	Less than 2.5 min.
	Search speed	SHUTTLE: DT SELECT switch off—Still, $\frac{1}{30}$, $\frac{1}{10}$, $\frac{1}{5}$, $\frac{1}{2}$, 1, 2, 5 and 10 times normal in forward and reverse direction. (Noiseless playback is possible within DT range) DT SELECT switch on—Var: 1 time reverse direction to 3 times in forward direction (Noiseless playback) JOG: Still to 1 in forward and reverse direction (Noiseless playback is possible within DT range)		
	Tape speed	9.53cm/sec (3.5 inch/sec)		
	Writing speed	10.26m/sec	8.54m/sec	8.54m/sec
	Wow/flutter	Less than 0.2% rms	0.25% DIN	0.25% DIN
Video	Recording system Luminance Chroma	FM 3.8 - 5.4MHz SC low-frequency conversion	FM 4.8 - 6.4MHz SC low-frequency conversion	FM 4.8 - 6.4MHz SC low-frequency conversion
	Horizontal resolution monochrome mode color mode	340 lines 260 lines	370 lines 270 lines	370 lines 270 lines
	S/N ratio B/W mode color mode	49dB 47dB	46dB 46dB	46dB 46dB
	Frequency response	50Hz to 15kHz	50Hz to 15kHz	50Hz to 15kHz
Audio	S/N ratio at 3% distortion	48dB	48dB	48dB
	Input (mic) (line)	−60dB 3k Ω +4dB 10k Ω /600 Ω	−60dB 3k Ω +4dB 10k Ω /600 Ω	−60dB 3k Ω +4dB 10k Ω /600 Ω
	Output (line) (headphones) (monitor)	+4dB −46 to −26dB 8 Ω +4dB 600 Ω	+4dB −46 to −26dB 8 Ω +4dB 600 Ω	+4dB −46 to −26dB 8 Ω +4dB 600 Ω

BVU-800 SERIES SPECIFICATIONS

		BVU-800/800PM	BVU-800P	BVU-800S
General	Dimensions width mm (inch) height depth	454 (17.8") 283 (11.1") 550 (21.7")	454 (17.8") 283 (11.1") 550 (21.7")	454 (17.8") 283 (11.1") 550 (21.7")
	Weight	37 kg (81 lb 9 oz)	37 kg (81 lb 9 oz)	37 kg (81 lb 9 oz)
	Power requirements	AC 100/120/220/240V $\pm 10\%$ (selectable), 48 to 64Hz		
	Power consumption	150W	170W	170W
	Operating temperature	5°C to 40°C (41°F to 104°F)	5°C to 40°C (41°F to 104°F)	5°C to 40°C (41°F to 104°F)
	Storage temperature	−20°C to 60°C (−4°F to 140°F)	−20°C to 60°C (−4°F to 140°F)	−20°C to 60°C (−4°F to 140°F)
	Fast forward time with KCA-60	Less than 4 min.	Less than 4 min.	Less than 4 min.
	Rewind time with KCA-60	Less than 2.5 min.	Less than 2.5 min.	Less than 2.5 min.
	Search speed	SHUTTLE: Still, $\frac{1}{30}$, $\frac{1}{10}$, $\frac{1}{5}$, $\frac{1}{2}$, 1, 2, 5 and 10 times normal in forward and reverse direction JOG: Still to 1 in forward and reverse direction		
	Tape speed	9.53cm/sec (3.5 inch/sec)		
	Writing speed	10.26m/sec	8.54m/sec	8.54m/sec
	Wow/flutter	Less than 0.2% rms	0.25% DIN	0.25% DIN
Video	Recording system Luminance Chroma	FM 3.8 to 5.4MHz SC low-frequency conversion	FM 4.8 to 6.4MHz SC low-frequency conversion	FM 4.8 to 6.4MHz SC low-frequency conversion
	Horizontal resolution monochrome mode color mode	340 lines 260 lines	370 lines 260 lines	370 lines 260 lines
	S/N ratio B/W mode color mode	49dB 47dB	46dB 46dB	46dB 46dB
	Frequency response	50Hz to 15kHz	50Hz to 15kHz	50Hz to 15kHz
Audio	S/N ratio at 3% distortion	48dB	48dB	48dB
	Input (mic) (line)	−60dB 3k Ω +4dB 10k Ω /600 Ω	−60dB 3k Ω +4dB 10k Ω /600 Ω	−60dB 3k Ω +4dB 10k Ω /600 Ω
	Output (line) (headphones) (monitor)	+4dB −46 to −26dB 8 Ω +4dB 600 Ω	+4dB −46 to −26dB 8 Ω +4dB 600 Ω	+4dB −46 to −26dB 8 Ω +4dB 600 Ω

U-matic VIDEOCASSETTE RECORDERS

BVU-800/820/850 SERIES OPTIONAL ACCESSORIES

Remote Control Unit

BVR-820



- Cue-point memory of up to 3 points for cue up, preroll, and stunt play
- Adjustable preroll time
 - up to 9 sec. 29 frames (NTSC, PAL-M)
 - up to 9 sec. 24 frames (PAL, SECAM)
- Dynamic tracking playback between two cue points for the BVU-820 and BVH-2000.
- Capability of memory expansion up to 256 points
- Fluorescent tube display:
 - CTL/Time code, VTR operation mode, Cue points
- Up to 500m remote control capability with RS-422 interface
- Various remote control functions:
 - Record, Playback, Fast Forward, Rewind, Stop, Standby, Eject, Preroll, Search
- External command input and status output

Supplied accessories

AC power cord × 1
Operation and maintenance manual

Specifications

Preroll time: NTSC or PAL-M: 0 seconds 00 frames to 9 seconds 29 frames
PAL or SECAM: 0 seconds 00 frames to 9 seconds 24 frames

Safety timer: 10 seconds, 1/2/3/4/5/6/7/8/9 minutes

Connector: REMOTE (9P): 9-pin RS422
START SIGNAL IN: BNC
EXTERNAL I/O: 14-pin

Operating temperature: 5°C to 40°C (41°F to 104°F)

Dimensions: 424(W) × 92(H) × 263mm(D) (16.7 × 3.6 × 10.4")

Weight: 4.6 kg (10 lb 2 oz)

Power requirements: AC 100/120/220/240V ±10% (selectable), 50/60Hz ±10%

Power consumption: 21W

Remote Control Unit

BVR-800



- Fluorescent tube display:
 - CTL/Time code, VTR operation mode
- Up to 500m remote control capability with RS-422 interface
- Various remote control functions:
 - Record, Playback, Fast Forward, Rewind, Stop, Standby, Eject, Preroll, Search
- Adjustable preroll time
 - up to 9 sec. 29 frames (NTSC, PAL-M)
 - up to 9 sec. 24 frames (PAL, SECAM)
- External command input and status output

Supplied accessories

AC power cord × 1
Rack mount kit × 1
Operation and maintenance manual

Specifications

Preroll time: NTSC or PAL-M: 0 seconds 00 frames to 9 seconds 29 frames
PAL or SECAM: 0 seconds 00 frames to 9 seconds 24 frames

Safety timer: 10 seconds, 1/2/3/4/5/6/7/8/9 minutes

Connector: REMOTE (9P): 9-pin RS422
START SIGNAL IN: BNC
EXTERNAL I/O: 14-pin

Operating temperature: 5°C to 40°C (41°F to 104°F)

Dimensions: 424(W) × 92(H) × 177mm(D) (16.7 × 3.6 × 7")

Weight: 3.5 kg (7 lb 4 oz)

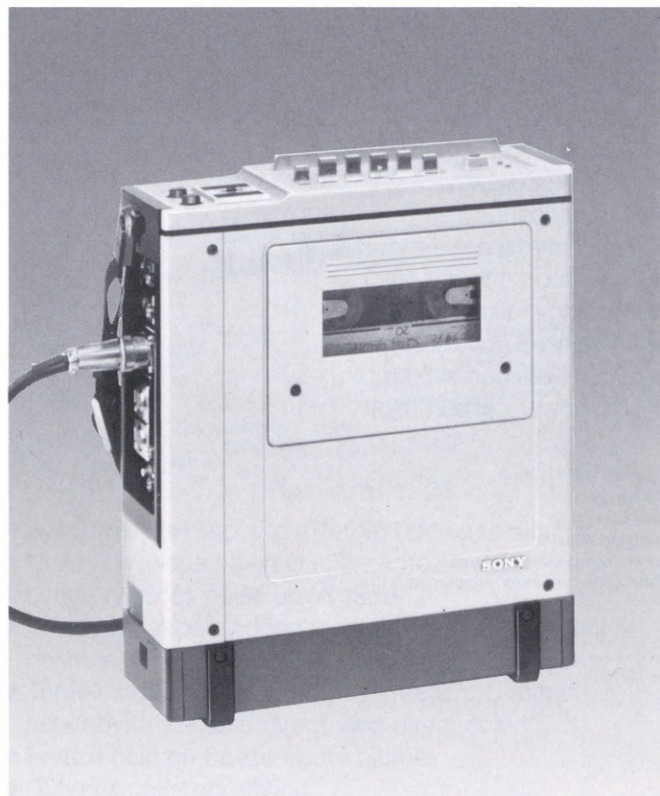
Power requirements: AC 100/120/220/240V ±10% (selectable), 50/60Hz ±10%

Power consumption: 17W

U-matic Portable Videocassette Recorder

BUV-110/110P/110S/110PM

(NTSC) (PAL) (SECAM) (PAL-M)



- Lightweight and rugged construction
- Low power consumption (13W)
- Back-space editing
- Recording/playback of SMPTE/EBU time code
- Real time counter
- Picture search function
- Warning indicators
- Built-in color replay
- AGC or manual audio recording
- Framing servo
- TBC connection facility

Supplied accessories

Carrying case
Shoulder strap
Carrying strap
Camera cable CCJQ (10-pin—14-pin) 0.5m
Operation and maintenance manual

Optional accessory

BK-112 Plug-in Time Code Generator

Dimensions: 123(W) × 23(H) × 93mm(D)
(4.8 × 0.9 × 3.7")

Weight: 250 g (8.8 oz)

Power requirement: DC 5V (Power is supplied from BUV-110 series)

SPECIFICATIONS

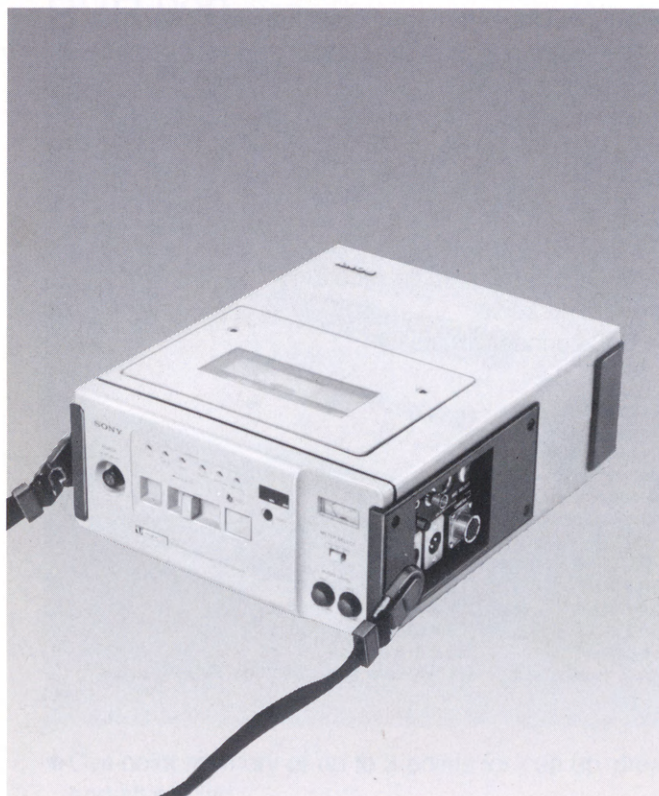
		BUV-110	BUV-110P	BUV-110S	BUV-110PM
General	Dimensions width	336 (13.2")	336 (13.2")	336 (13.2")	336 (13.2")
	mm (inch) height	135 (5.3")	135 (5.3")	135 (5.3")	135 (5.3")
	depth	393 (15.5")	393 (15.5")	393 (15.5")	393 (15.5")
	Weight (Main unit)	9.1 kg (20 lb 1 oz)	9.1 kg (20 lb 1 oz)	9.1 kg (20 lb 1 oz)	9.1 kg (20 lb 1 oz)
	(w/battery, cassette)	11.3 kg (24 lb 15 oz)	11.3 kg (24 lb 15 oz)	11.3 kg (24 lb 15 oz)	11.3 kg (24 lb 15 oz)
	Power requirements	DC 12 ± 1V	DC 12 ± 1V	DC 12 ± 1V	DC 12 ± 1V
	Power consumption	13W (12V, 1.08A)	13W (12V, 1.08A)	13W (12V, 1.08A)	13W (12V, 1.08A)
	Operating temperature	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)
	Storage temperature	−20°C to 60°C (−4°F to 140°F)	−20°C to 60°C (−4°F to 140°F)	−20°C to 60°C (−4°F to 140°F)	−20°C to 60°C (−4°F to 140°F)
Video	F. FWD, REW TIME	Less than 3 min.	Less than 3 min.	Less than 3 min.	Less than 3 min.
	Tape speed	9.53cm/sec.	9.53cm/sec.	9.53cm/sec.	9.53cm/sec.
	Wow/flutter	Less than 0.2% rms	0.25% DIN	0.25% DIN	Less than 0.2% rms
	Recording system Luminance Chroma	FM 3.8 - 5.4MHz SC low-frequency conversion	FM 4.8 - 6.4MHz SC low-frequency conversion	FM 4.8 - 6.4MHz SC low-frequency conversion	FM 3.8 - 5.4MHz SC low-frequency conversion
Audio	Horizontal resolution (color mode)	260 lines	260 lines	260 lines	260 lines
	S/N ratio	Better than 45dB in color	Better than 45dB in color	Better than 45dB in color	Better than 45dB in color
	Frequency response	50Hz to 15kHz	50Hz to 15kHz	50Hz to 15kHz	50Hz to 15kHz
	S/N ratio at 3% distortion	Better than 48dB	Better than 48dB	Better than 48dB	Better than 48dB
Audio	Input (mic) (line)	−60dB 3kΩ +4dB 10kΩ	−60dB 3kΩ +4dB 10kΩ	−60dB 3kΩ +4dB 10kΩ	−60dB 3kΩ +4dB 10kΩ
	Output (line) (earphone)	Low impedance, +4dB, balanced 600Ω −32 to −20dB variable	Low impedance +4dB, balanced 600Ω −28 to −16dB variable	Low impedance +4dB, balanced 600Ω −28 to −16dB variable	Low impedance +4dB, balanced 600Ω −32 to −20dB variable

U-matic VIDEOCASSETTE RECORDERS

U-matic Portable Videocassette Recorder

BVU-50/50P/50S

(NTSC) (PAL) (SECAM)



- Compact and lightweight: 5.7 kg (12 lb 9 oz) without battery and tape
- Back-space editing
- Long battery operation
- Gyroscopic error suppression
- Framing servo
- RF confidence head
- Real time tape counter display
- Time code address track
- Warning indicators
- Audio level control
- Switchable audio input
- Low power consumption

Supplied accessories

Carrying case
Shoulder strap
Carrying strap
Time code generator case
Time code generator attachment

SPECIFICATIONS

		BVU-50	BVU-50P	BVU-50S
Dimensions	width	270 (10.6")	270 (10.6")	270 (10.6")
	mm (inch)	125 (4.9")	125 (4.9")	125 (4.9")
	height	335 (13.2")	335 (13.2")	335 (13.2")
	depth			
Weight (Main unit)		5.7 kg (12 lb 9 oz)	5.7 kg (12 lb 9 oz)	5.7 kg (12 lb 9 oz)
	(w/battery, cassette)	7.9 kg (17 lb 7 oz)	7.9 kg (17 lb 7 oz)	7.9 kg (17 lb 7 oz)
Power requirements		DC 12 $\pm$ 1V	DC 12 $\pm$ 1V	DC 12 $\pm$ 1V
Power consumption		11W (12V, 900mA)	12W (12V, 1A)	12W (12V, 1A)
Operating temperature		0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)
Storage temperature		-20°C to 60°C (-4°F to 140°F)	-20°C to 60°C (-4°F to 140°F)	-20°C to 60°C (-4°F to 140°F)
Tape speed		9.53cm/sec.	9.53cm/sec.	9.53cm/sec.
Wow/flutter		Less than 0.2% rms	0.25% DIN	0.25% DIN
Recording system	Luminance	FM 3.8 to 5.4MHz	FM 4.8 to 6.4MHz	FM 4.8 to 6.4MHz
	Chroma	SC low-frequency conversion	SC low-frequency conversion	SC low-frequency conversion
Horizontal resolution		260 lines	260 lines	260 lines
color mode				
S/N ratio		Better than 46dB in color	Better than 46dB in color	Better than 46dB in color
Frequency response		50Hz to 15kHz	50Hz to 15kHz	50Hz to 15kHz
S/ ratio		Better than 48dB	Better than 48dB	Better than 48dB
at 3% distortion				
Input (mic)		-60dB 3k Ω 600 Ω (microphone)	-60dB 3k Ω 600 Ω (microphone)	-60dB 3k Ω 600 Ω (microphone)
Output (earphone)		-32 to -20dB variable	-32 to -20dB variable	-32 to -20dB variable

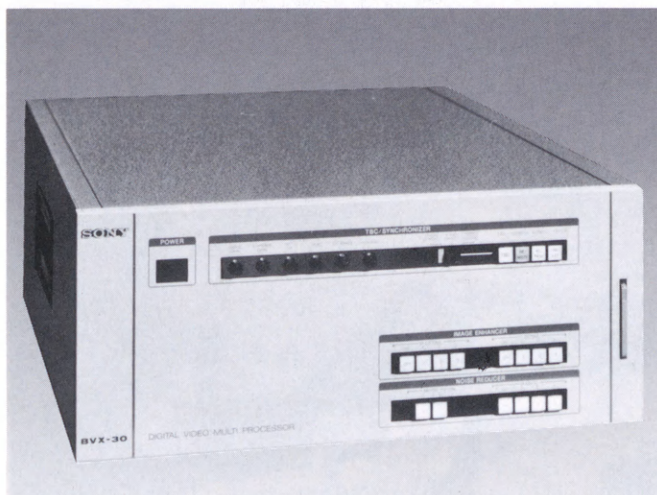
DIGITAL VIDEO MULTI-PROCESSOR

Digital Video Multi-Processor

BVX-30/30PM

(NTSC)

(PAL-M)



- Synchronizes output to external reference signals
- Newly developed high-efficiency noise extraction circuit reduces noise up to 15dB
- Image enhancer, independent 4 position H/V detail controls
- Three-mode time base error correction: U-matic heterodyne, U-matic direct, and direct color*
- Freeze field on freeze frame picture
- Optional color correction
- Full remote control including optional color correction
- Requires only 4 EIA rack space units

*NTSC model only

Supplied accessories

Extension board (1 set)
Rack mounting bracket (1 set)

Specifications

Power requirements:
Power consumption:
Operating temperature and humidity:

AC 90 to 132V, 50 to 60Hz
400W (with BK-31 and BVR-30)
10°C to 40°C (50°F to 104°F),
10 to 80%
Approx. 424(W) × 177(H) × 580mm(D)
(16.7 × 7 × 22.8")
Approx. 25 kg (55 lb 2 oz)

Dimensions:

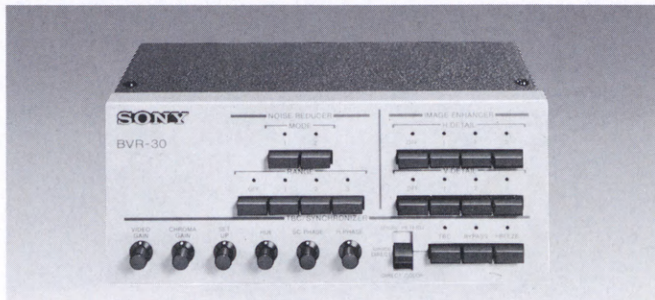
Weight:

BVX-30 OPTIONAL ACCESSORIES

Remote Control Unit

BVR-30

Controls all functions of the BVX-30 Digital Video Multi-Processor except the optional BK-31 color corrector.



Specifications

Dimensions:

212(W) × 88(H) × 110mm(D)
(8.4 × 3.5 × 4.3")

Weight:

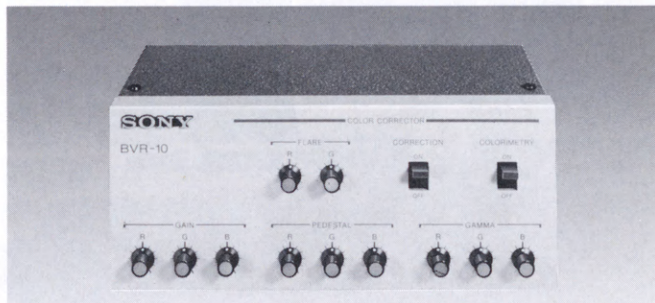
1.3 kg (2 lb 14 oz)

Supplied accessories:

Remote control cable
Rack angle
Operation and maintenance manual

Color Correction/Remote Control Unit

BK-31/BVR-10



Specifications

Dimensions:

212(W) × 88(H) × 110mm(D)
(8.4 × 3.5 × 4.3")

Weight:

1.2 kg (2 lb 10 oz)

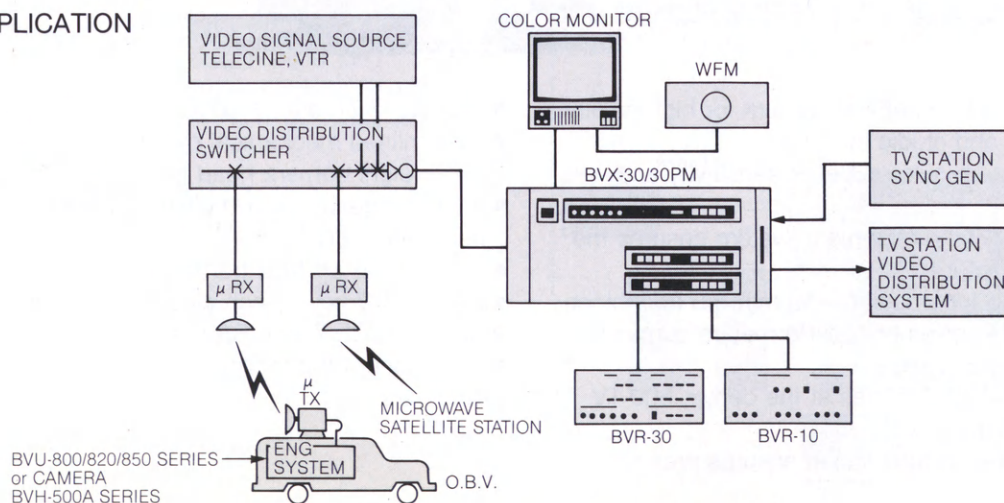
Color correction range:

Gain (R.G.B) ± 30%, Pedestal (R.G.B) ± 15%
Gamma (R.G.B) ± 10%, Flare (R.G.B) 20%

Supplied accessories:

Remote control cable
Rack angle
Operation and maintenance manual

SYSTEM APPLICATION



STUDIO/FIELD CAMERA SYSTEM

Studio/Field Camera

BVP-360/360P

(NTSC)

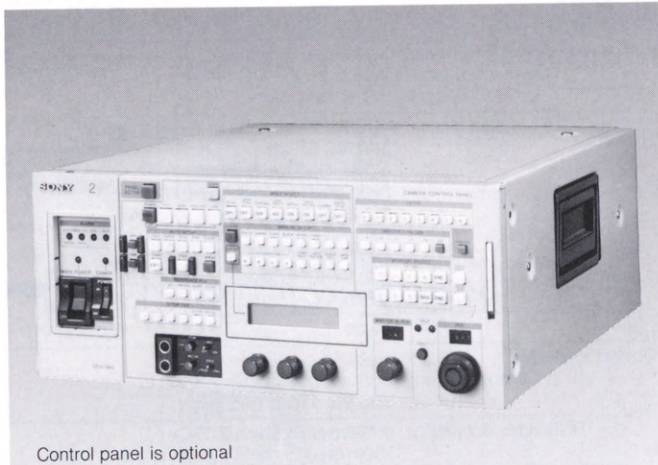
(PAL)



Lens, VF, and tripod are optional

- A new generation Studio/Field camera for high quality field production and studio systems
- F1.2 Optical system gives superior sensitivity and depth of field
- A comprehensive auto alignment system ensures the highest quality picture
- The latest pickup tube design— $\frac{2}{3}$ -inch MS Plumbicon or MS "SATICON" gives high performance surpassing conventional larger tubes
- High resolution—700 TV lines at the center, 600 TV lines in the corners
- Digital registration compensation ensures precise registration
- Superior S/N ratio of 60dB (NTSC)/58dB (PAL)
- Streamlined mechanical design with compact and light-weight camera head for great maneuverability
- Interchangeable triax/multicore adaptors for camera head and CCU.
- State of the art triax transmission system
- BVF-7000Q new 7-inch color viewfinder
- BVF-70/70CE 7-inch B/W viewfinder
- Convenient filing facility—Setup file, scene file, and lens file

Camera Control Unit CCU-360/360P



Control panel is optional

- Self contained power supply block makes utility AC power available for the camera head.
- RGB chroma key outputs with triax cable.
- SMPTE/EIA color bars, EBU/95% color bars output
- 2-wire, 4-wire, or RTS intercom system is provided.
- Detachable CCU control panel can be used as a remote control panel.
- Fully system designed inputs/outputs facility is provided.

BVP-3A/30 PORTABLE COMPANION



BVP-3A
with CA-31

CCU-360

Triax Connection with CCU-360

- Signals transferred: Y/R-Y/B-Y, Return video, MIC, INTERCOM, PGM (each 1 channel) Horizontal control, AC power, Serial data length: max. 1200m (8.5mmø), max. 2400m (14.5mmø)

Coaxial Cable Connection

- Coaxial cables can be used to transmit all of the above signals except power.
- Cable length: max. 1200m (5C2V or equivalent)
max. 2400m (7C2V or equivalent)

Remote Control Panel RCP-3610/3611/3620/3621/3631



RCP-3631

Remote Control Panel Type-I will be available

RCP-3610/3611

- Simple studio operation
- Conventional remote control
- Simple and easy operation

Remote Control Panel Type-II

RCP-3620/3621

- Versatile field application
- Remote control for outside broadcasting
- Basic painting facility
- Simple auto setup functions

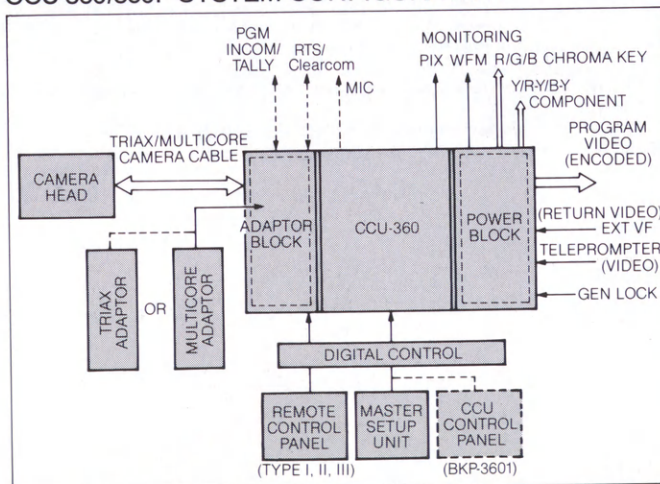
Remote Control Panel Type-III

RCP-3631

- Sophisticated production
- Creative production remote control
- Extended painting facilities including differential gamma and flare
- File facilities

*Remote Control Panel is available with either Joystick Iris/Master black control (RCP-3610/3620) or independent rotating controls for Iris and Master black control (RCP-3611/3621/3631)

CCU-360/360P SYSTEM CONFIGURATION



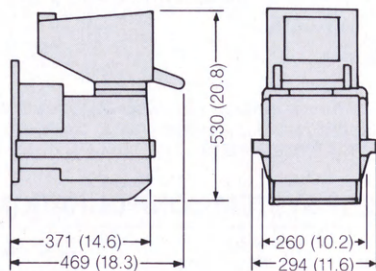
STUDIO/FIELD CAMERA SYSTEM

STUDIO/FIELD CAMERA SYSTEM SPECIFICATIONS

BVP-360/360P

CAMERA HEAD	
Pickup tube system:	$\frac{2}{3}$ -inch MS Plumbicon™ or MS "SATICON" 3-tube system
Optical system:	F1.2 prism
Filter wheels	Color filters: A: CROSS B: 3200°K C: 4300°K D: 6300°K
	ND filters: 0: cap 1: clear 2: $\frac{1}{4}$ 3: $\frac{1}{16}$
Sensitivity (at 90% reflectance):	2000 lux with F4.5 typical (MS "PbO") 2000 lux with F4 typical (MS "SATICON")
Minimum subject illumination:	Approx. 10 lux F1.2 + 24dB gain (MS "PbO") Approx. 12 lux F1.2 + 24dB gain (MS "SATICON")
S/N ratio:	60dB (NTSC), 58dB (PAL) Typical
Resolution:	700 TV lines at center
Registration error:	zone 1: 0.05% zone 2: 0.1% zone 3: 0.15%
Geometric distortion:	1% (all zones)
Connectors	Outputs: Triax/Multicore AC utility out (AC100/120/220/240V, 100VA max.) *1 Encoded video out (BNC): 1Vp-p, 75 ohms Ext VF out (BNC): 1Vp-p, 75 ohms Return video out (BNC): 1Vp-p, 75 ohms *2 Prompter out (BNC): 1Vp-p, 75 ohms *2 VTR (26-pin): CCZ type Script: 5W, 12V AC
	Input: Gen lock in: 1Vp-p, 75 ohms Mic in (2-ch, XLR 3-pin): -60dBs Remote: Simple remote control unit connector (12-pin) Return control: Return video selection connector (6-pin)
	*2 Lens (option): Multi connector
	Tracker Intercom use
	Incom/PGM audio (2-ch) Double headset jack
*3 Operating temperature:	-20°C to +45°C (-4°F to +113°F)
Weight:	Approx 29 kg (64 lb)

Dimensions



Unit: mm (inches)

*1 Encoded video out is available only when self contained camera operation.

*2 Optional

*3 In case of continuous operation under high temperature for long time, a camera might not conform to the above specifications.

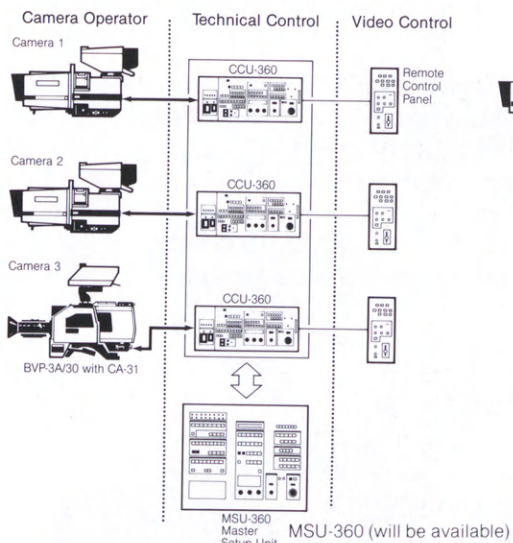
CCU-360/360P

INPUTS/OUTPUTS	
Input signals (Triax/Multicore)	
Return video 1 & 2 (BNC, bridge):	1Vp-p, 75 ohms
Gen lock in:	VBS/BS (BNC, bridge): 1Vp-p, 75 ohms NTSC (0.286Vp-p sync) PAL (300mVp-p, sync) Sync (BNC, bridge): 2Vp-p, 75 ohms SC (BNC, bridge): 1Vp-p, 75 ohms PAL pulse (BNC bridge): 2Vp-p, 75 ohms
Prompter in (BNC):	1Vp-p, 75 ohms
MSC/CCP:	16-pin x 2
RCP:	16-pin
Output signals	
Encoded video out (BNC):	VBS: 1Vp-p, 75 ohms x 3 VBS/VB: 1Vp-p, 75 ohms
RGB video out (BNC):	0.714Vp-p, 75 ohms (NTSC) 700mVp-p, 75 ohms (PAL)
Y/R-Y/B-Y out:	Y: 1Vp-p, 75 ohms R-Y: 0.7Vp-p, 75 ohms B-Y: 0.7Vp-p, 75 ohms
Waveform monitor out (BNC):	0.714Vp-p, 75 ohms (NTSC) 700mVp-p, 75 ohms (PAL)
PIX (BNC):	1Vp-p, 75 ohms
Sync out (BNC):	2Vp-p, negative, 75 ohms
SC out (BNC):	1Vp-p, 75 ohms
Mic out (2-ch, XLR 3-pin):	0dB or -20dB
Waveform control:	4-pin
Communications	
PGM/Incom/Tally (19-pin):	PGM: 0dB/-20dB Incom: Two channels, 0dB Tally: DC 24V contact
RTS/Clearcom-TW12:	XLR 3-pin x 2
Incom/PGM:	Double headset jack
GENERAL	
Power requirements:	AC 100/120/220/240V $\pm 10\%$, 50/60Hz
Power consumption:	Approx. 350VA
Operating temperature:	0°C to 45°C (32°F to 113°F)
Weight:	Approx. 30 kg (66 lb 2 oz)
Dimensions:	Approx. 424(W) x 177(H) x 450mm(D) (16.7 x 7 x 17.7")

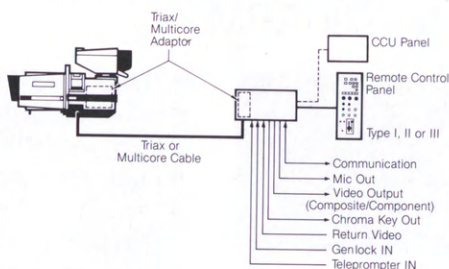
RCP Remote Control Panel

	RCP-3610/3611	RCP-3620/3621	RCP-3631
Connector			
CCU connector	16-pin	16-pin	16-pin
Monitor out	6-pin	6-pin	6-pin
Weight (approx.)	2.0 kg (4 lb 7 oz)	RCP-3620: 2.2 kg (4 lb 14 oz) RCP-3621: 2.0 kg (4 lb 7 oz)	2.0 kg (4 lb 7 oz)
Dimensions (approx.)	109(W) x 310(H) x 94mm(D) (4.2 x 12.2 x 3.7")	109(W) x 310(H) x 94mm(D) (4.2 x 12.2 x 3.7")	109(W) x 310(H) x 94mm(D) (4.2 x 12.2 x 3.7")

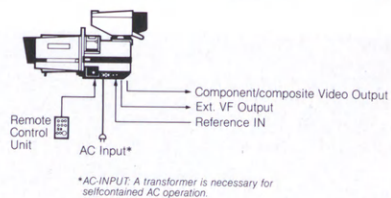
MULTIPLE CAMERA OPERATION



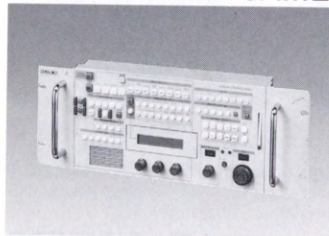
TRIAX/MULTICORE SYSTEM



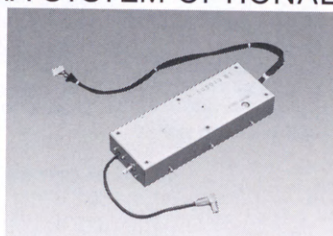
SELF CONTAINED OPERATION



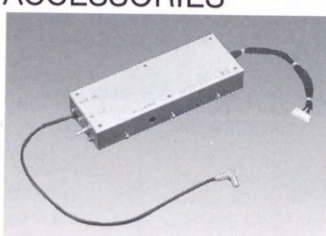
STUDIO/FIELD CAMERA SYSTEM OPTIONAL ACCESSORIES



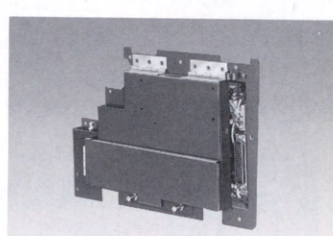
CCU Control Panel
BKP-3601



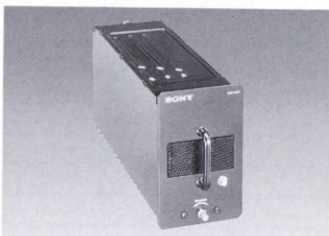
Prompter Board Kit for CHU
BKP-3602



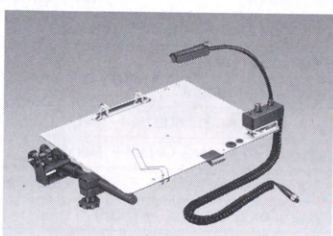
Prompter Board Kit for CCU
BKP-3603



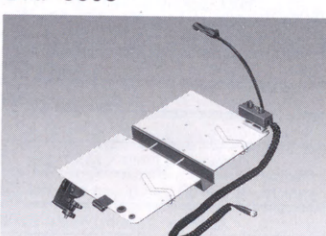
Triax Board Kit for CHU
BKP-3605



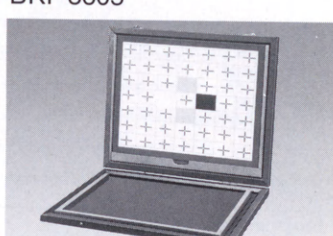
Triax Board Kit for CCU
BKP-3607



Script Holder with Lamp
BKP-3613



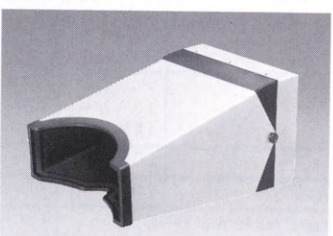
Script Holder with Lamp
BKP-3614



Auto Set Up Chart
BKP-3615



VF Hood, Bellows Type
BKP-3616



Monitor Hood
VF-502



Carrying Case
LC-3601



Triax Camera Adaptor
CA-31

BKP-3604K
(with KINGS) Triax connector box for CHU
BKP-3604F
(with FISHER) Triax connector box for CHU
BKP-3606K
(with KINGS) Triax connector box for CCU
BKP-3606F
(with FISHER) Triax connector box for CCU
RMM-3601
19-inch rack mount metal
RM-3601
Remote control unit

PORTABLE COLOR CAMERAS

Portable Color Camera, 3-tube

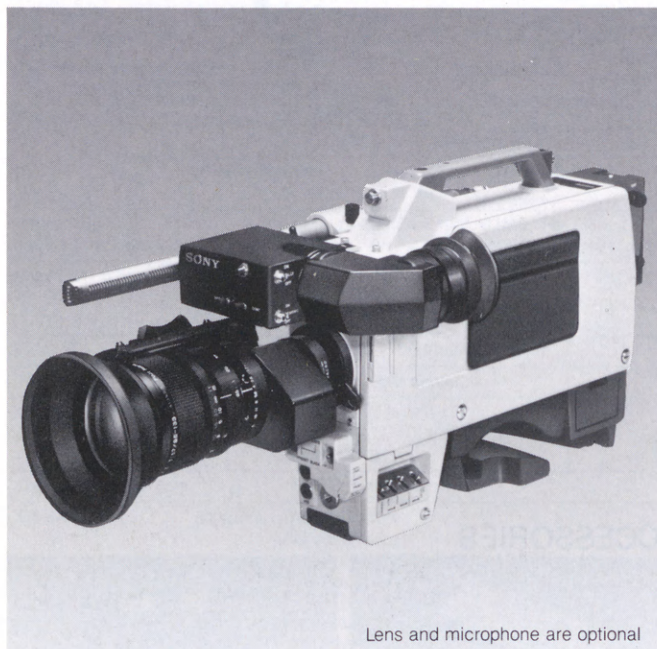
BVP-330A/330AP/330AS/330APM

(NTSC)

(PAL)

(SECAM)

(PAL-M)



Lens and microphone are optional

- Three $\frac{2}{3}$ -inch Diode Gun Plumbicon™
- Dynamic focus—improved corner resolution
- Improved white shading correction
- Auto centering (digital memory)
- High resolution
- Compact and lightweight (4.7 kg, 10 lb 6 oz)
- High sensitivity and low noise performance
- Color framing output
- Low power consumption (24W)
- Two line image enhancer
- Automatic beam optimizer
- Automatic iris close
- Automatic white/black balance
- Preset color balance

Supplied accessories

Carrying case	14-pin connector
Tripod attachment	6-pin connector
Camera cable (CCQ-2AR)	Bias light lamp
Battery case	Fuse
Circuit board extender	Dust cover
Viewfinder	Rain proof cover
Eye caps	Shoulder strap
PCB extraction tool	

SPECIFICATIONS

	BVP-330A	BVP-330AP	BVP-330AS	BVP-330APM
Pickup tube	$\frac{2}{3}$ -inch Diode Gun Plumbicon			
Optical system	F1.4 High index prism			
Lens mount	Special bayonet mount			
Filter wheels	0: cap, 1: 3200°K, 2: 5600°K + $\frac{1}{4}$ ND, 3: 5600°K			
Viewfinder	1.5-inch with PEAKING ON/OFF switch			
Sensitivity	2000 lux with F4.5 (typical) 90% reflectance			
Minimum subject illumination	Approx. 25 lux (F1.4 lens, +18dB)			
S/N ratio	58dB (Typical)	56dB (Typical)	56dB (Typical)	58dB (Typical)
* Horizontal resolution	600 TV lines	600 TV lines	600 TV lines	600 TV lines
Registration zone 1	0.1%	0.1%	0.1%	0.1%
zone 2	0.2%	0.2%	0.2%	0.2%
zone 3	0.4%	0.4%	0.4%	0.4%
Geometric distortion zone 1	1%	1%	1%	1%
zone 2	1.5%	1.5%	1.5%	1.5%
zone 3	1.5%	1.5%	1.5%	1.5%
Power requirements	DC 12V	DC 12V	DC 12V	DC 12V
Power consumption	24W	24W	24W	24W
Continuous recording time	Approx. 2 hours with BP-90			
Warm-up time	Approx. 3.5 seconds (from preheat condition)			
Operating temperature	-20°C to 50°C (-4°F to 122°F)	-20°C to 50°C (-4°F to 122°F)	-20°C to 50°C (-4°F to 122°F)	-20°C to 50°C (-4°F to 122°F)
Storage temperature	-20°C to 60°C (-4°F to 140°F)	-20°C to 60°C (-4°F to 140°F)	-20°C to 60°C (-4°F to 140°F)	-20°C to 60°C (-4°F to 140°F)
Weight	Approx. 4.8 kg (10 lb 9 oz) for camera Approx. 0.6 kg (1 lb 2 oz) for viewfinder			
Auto centering	○	○	○	○
Auto W/B balance	○	○	○	○
2 line image enhancement	○	○	○	○
Color framing out from VTR connection	○	○	○	○
Video level indicator	○	○	○	○

Portable Color Camera, 3-tube

BVP-30/30P/30S/30PM

(NTSC) (PAL) (SECAM) (PAL-M)



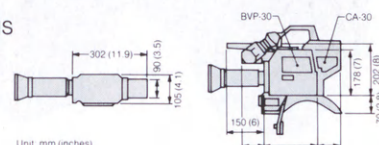
Lens and CA-30 are optional

Supplied accessories

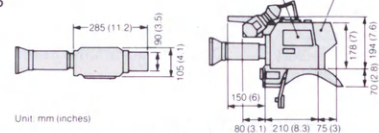
Tripod adaptor Extractor
Tripod bracket Chart for automatic centering adjustment
Extension board

- Newly developed electrostatic deflection tube (three $\frac{2}{3}$ -inch MS PLUMBICON tube system)
- High resolution of 650 TV lines at center
- Improved corner resolution
- Superior S/N ratio of 59dB (NTSC, PAL-M) or 57dB (PAL, SECAM)
- Auto centering function
- Auto white balance with 3-position digital memory
- Automatic beam optimizer
- Wide dynamic range to accept excessive light
- Two line image enhancer
- Shading compensation with lens extender
- Genlock facility with CA-3 or CA-30, camera adaptor
- CCU-300 interface with CA-30 camera adaptor
- Lightweight (4.9 kg with VF and CA-3)

BVP-30/CA-30 DIMENSIONS



BVP-30/CA-3 DIMENSIONS



SPECIFICATIONS

	BVP-30/30PM	BVP-30P/30S
Pickup tube	$\frac{2}{3}$ -inch Diode Gun Plumbicon (magnetic focus, static deflection)	
Optical system	F1.4 prism system	
Lens mount	Special bayonet mount	
Filter wheels	1: 3200°K, 2: 5600°K + $\frac{1}{4}$ ND, 3: 5600°K, 4: 5600°K + $\frac{1}{16}$ ND	
Viewfinder	1.5-inch with TALLY ON/OFF switch	
Sensitivity	2000 lux with F4.5 (typical) 90% reflectance	
Minimum subject illumination	Approx. 25 lux (F1.4 lens, +18dB)	
S/N ratio	59dB (Typical)	57dB (Typical)
* Horizontal resolution	650 TV lines	650 TV lines
Registration zone 1	0.1%	0.1%
zone 2	0.15%	0.15%
zone 3	0.3%	0.3%
Geometric distortion zone 1	1%	1%
zone 2	1%	1%
zone 3	1%	1%
Power requirements	DC 12V	DC 12V
Power consumption	24W (NTSC, PAL, PAL-M), 26W (SECAM)	
Continuous recording time	Approx. 2 hours with BP-90	
Warm-up time	Approx. 3.5 seconds (from preheat condition)	
Operating temperature	-20°C to 40°C (-4°F to 104°F)	-20°C to 40°C (-4°F to 104°F)
Storage temperature	-20°C to 50°C (-4°F to 122°F)	-20°C to 50°C (-4°F to 122°F)
Weight	4.3 kg (9 lb 7 oz) with viewfinder 0.6 kg for CA-3, 0.9 kg for CA-30	
Auto centering	○	○
Auto W/B balance	○	○
2-line image enhancement	○	○
Color framing out from multi connector	○	○
Video level indicator	○	○

* Horizontal resolution: center area.

PORTABLE COLOR CAMERAS

Portable Color Camera, 3-tube

BVP-3A/3AP/3AS/3APM

(NTSC) (PAL) (SECAM) (PAL-M)



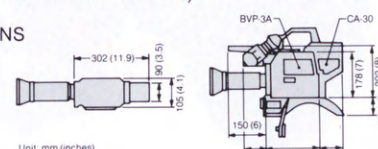
Lens and CA-30 are optional

Supplied accessories

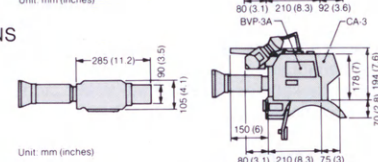
Tripod adaptor Extractor
Tripod bracket Chart for automatic centering adjustment
Extension board

- Newly developed electrostatic deflection tube (three $\frac{2}{3}$ -inch MS "SATICON" tube system)
- High resolution of 650 TV lines at center
- Improved corner resolution
- Superior S/N ratio of 59dB (NTSC, PAL-M) or 57dB (PAL, SECAM)
- Auto centering function
- Auto white balance with 3-position digital memory
- Automatic beam optimizer
- Wide dynamic range to accept excessive light
- Two line image enhancer
- Shading compensation with lens extender
- Genlock facility with CA-3 or CA-30 camera adaptors
- CCU-300 interface with CA-30 camera adaptor
- Lightweight (4.9 kg with VF and CA-3)

BVP-3A/CA-30 DIMENSIONS



BVP-3A/CA-3 DIMENSIONS



SPECIFICATIONS

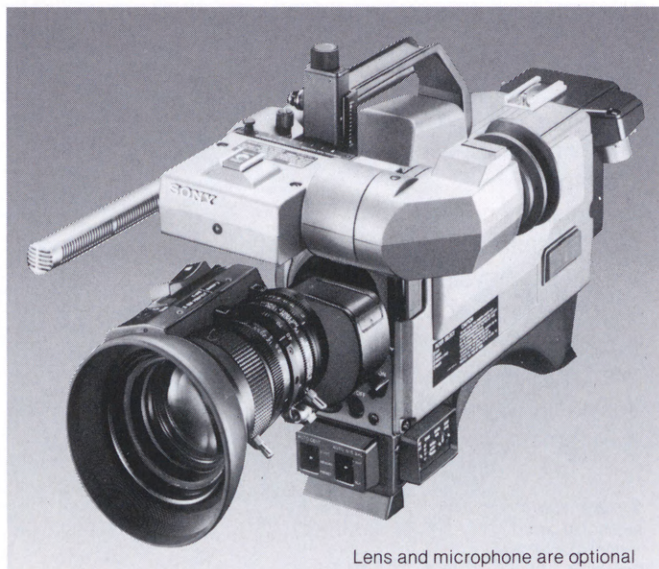
	BVP-3A/3APM	BVP-3AP/3AS
Pickup tube	$\frac{2}{3}$ -inch MS "SATICON"	
Optical system	F1.4 prism system	
Lens mount	Special bayonet mount	
Filter wheels	1: 3200°K, 2: 5600°K + $\frac{1}{4}$ ND, 3: 5600°K, 4: 5600°K + $\frac{1}{16}$ ND	
Viewfinder	1.5-inch with TALLY ON/OFF switch	
Sensitivity	2000 lux with F4 (typical) 90% reflectance	
Minimum subject illumination	Approx. 30 lux (F1.4 lens, +18dB)	
S/N ratio	59dB (Typical)	57dB (Typical)
* Horizontal resolution	650 TV lines	650 TV lines
Registration zone 1	0.1%	0.1%
zone 2	0.15%	0.15%
zone 3	0.3%	0.3%
Geometric distortion zone 1	1%	1%
zone 2	1%	1%
zone 3	1%	1%
Power requirements	DC 12V	DC 12V
Power consumption	20W (NTSC, PAL, PAL-M), 22W (SECAM)	
Continuous recording time	Approx. 2 hours with BP-90	
Warm-up time	Approx. 3.5 seconds (from preheat condition)	
Operating temperature	-20°C to 40°C (-4°F to 104°F)	-20°C to 40°C (-4°F to 104°F)
Storage temperature	-20°C to 50°C (-4°F to 122°F)	-20°C to 50°C (-4°F to 122°F)
Weight	4.3 kg (9 lb 7 oz) with viewfinder 0.6 kg for CA-3, 0.9 kg for CA-30	
Auto centering	○	○
Auto W/B balance	○	○
2-line image enhancement	○	○
Color framing out from multi connector	○	○
Video level indicator	○	○

* Horizontal resolution: center area.

Portable Color Camera, 3-tube

BVP-150/150P

(NTSC) (PAL)



Lens and microphone are optional

- Three $\frac{2}{3}$ -inch MS "SATICON" tube
- High resolution of 650 TV lines at the center
- Improved corner resolution
- Ultra compact and lightweight (4.8 kg)
- Low power consumption, 19W
- Superior S/N ratio of 57dB (NTSC) or 55dB (PAL)
- Auto white/black balance
- Auto centering
- Two line image enhancer
- Gen lock facility
- Composite and component outputs (26-pin VTR connector)
- Level indication by zebra pattern

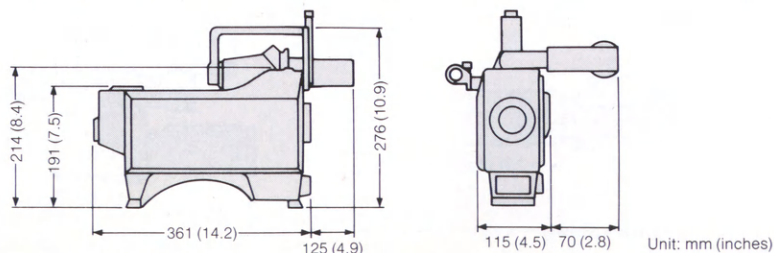
Supplied accessories

Tripod adaptor	Cable CCZ-2
Rain cover	CCZQ-2
Extension board	Adjustment chart
Carrying case	Operation and maintenance manual

SPECIFICATIONS

	BVP-150/BVP-150P
Pickup tube	$\frac{2}{3}$ -inch MS "SATICON" (magnetic focus, static deflection)
Optical system	F1.4 prism system
Lens mount	Special bayonet mount
Filter wheels	0: cap, 1: 3200°K, 2: 5600°K + $\frac{1}{4}$ ND, 3: 5600°K
Viewfinder	1.5-inch with TALLY ON/OFF switch
Sensitivity	2000 lux with F4 (typical), 90% reflectance
Minimum subject illumination	Approx. 30 lux (F1.4 lens, +18dB)
S/N ratio	NTSC: 57dB (typical), PAL: 55dB (typical)
* Horizontal resolution	650 TV lines
Registration zone 1	0.1%
zone 2	0.2%
zone 3	0.4%
Geometric distortion	1.5% max.
Power requirements	DC 12V
Power consumption	19W
Continuous recording time	Approx. 2.5 hours with BP-90
Warm-up time	Approx. 3.5 seconds (from preheat condition)
Operating temperature	-10°C to 45°C (14°F to 113°F)
Storage temperature	-20°C to 50°C (-4°F to 122°F)
Weight	Approx. 4.8 kg (10 lb 9 oz) with viewfinder
Auto centering	○
Auto W/B balance	○
2 line image enhancement	○
Color framing out from VTR connection	○
Video level indicator	○

Dimensions:



* Horizontal resolution: center area.

PORTABLE COLOR CAMERAS

Portable Color Camera, Single tube

BVP-1/1P/1S

(NTSC) (PAL) (SECAM)



Lens and CA-3 are optional

- Compact and lightweight; super maneuverability (only 3.4 kg with VF and CA-3)
- Single tube configuration HBST (High Band SMF Tricon) provides 400 TV lines of resolution
- Low power consumption, 12W with CA-3 camera adaptor
- Registration free
- Auto white balance with 3-position digital memory
- Cableless system
- Built-in unidirectional high sensitivity microphone
- Excellent S/N ratio of 54dB
- Automatic Beam Optimizer
- Two line image enhancer
- Automatic pickup tube protection shutter

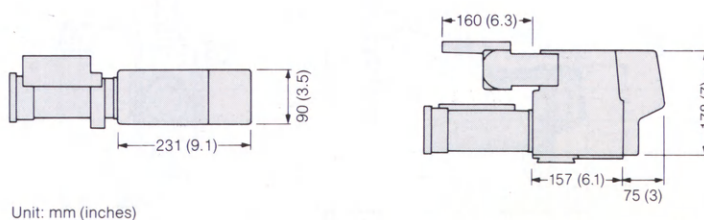
Supplied accessories

Extension board
Tripod adaptor plate
Extractor
Wind screen
50-pin cap
Mount cap

SPECIFICATIONS

	BVP-1	BVP-1P/1S
Pickup tube	2/3-inch HBST tube	2/3-inch HBST tube
Signal system	EIA standards, NTSC	CCIR standards, PAL, SECAM
Built-in filters	1: 3200°K 2: 5200°K + 1/4ND 3: 5200°K 4: 6800°K	1: 3200°K 2: 5200°K + 1/4ND 3: 5200°K 4: 6800°K
Sync system	Internal	Internal
Horizontal resolution	400 TV lines	400 TV lines
Sensitivity	2,000 lux with F4, 90% reflectance	2,000 lux with F4, 90% reflectance
Gain select	0dB, +6dB or +12dB (selectable)	0dB, +6dB or +12dB (selectable)
Minimum illumination	Approx. 80 lux (F1.6 lens, +12dB)	Approx. 80 lux (F1.6 lens, +12dB)
Video output	1.0Vp-p, sync negative, 75 ohms, unbalanced	1.0Vp-p, sync negative, 75 ohms, unbalanced
Signal-to-noise ratio	54dB (Typical)	53dB (Typical)
Power requirements	DC 10.3V to 17V	DC 10.3V to 17V
Power consumption	11W	11W (PAL), 12W (SECAM)
Warm-up time	4 seconds from preheat mode	4 seconds from preheat mode
Operating temperature	-20°C to +45°C (-4°F to 113°F)	-20°C to +45°C (-4°F to 113°F)
Storage temperature	-20°C to +50°C (-4°F to 122°F)	-20°C to +50°C (-4°F to 122°F)
Weight	2.75 kg without lens (6 lb 1 oz)	2.75 kg without lens (6 lb 1 oz)

Dimensions:



CAMERA ACCESSORIES

Camera Control Unit

CCU-300/300P/300PM

(NTSC) (PAL) (PAL-M)



- AC/DC 2-way power operation
- 600m max. power operation
Max. 600m: 1.5 inch VF in camera
CCU-300 with AC operation
Max. 300m: 5 inch VF in camera
CCU-300 with AC operation
- Genlock function
- Multi monitor
- Mixing monitor
- Double jacks for headset
- Easy maintenance and inspection
- Compact and lightweight

Supplied accessories

CCU adaptor for BVP-250/300/330 series cameras
Power cable
Knobs for centering control
Spare fuses
PCB extender board
Spare connectors: 16P, 24P, XLR-7P
Mounting brackets for CCU adaptor
Operation and maintenance manual

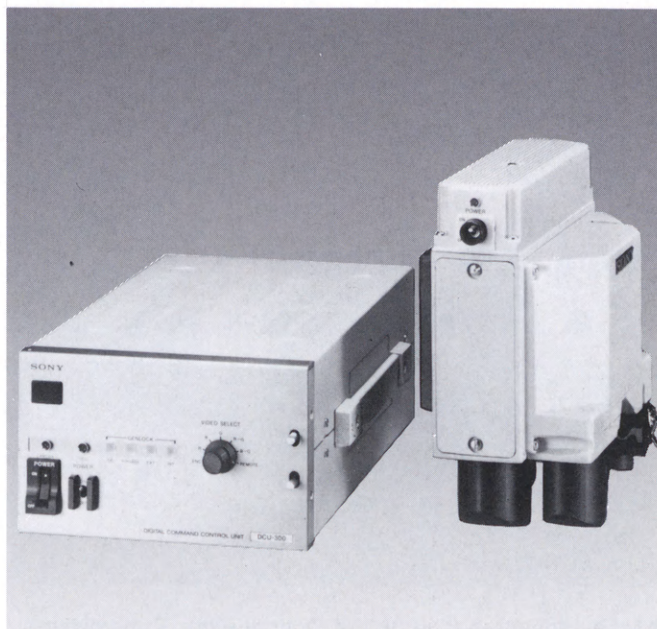
Specifications

Power requirements: AC 100/120/220/240V $\pm 10\%$, 50/60Hz
DC 10.5V to 17V
Power consumption: AC 85W, DC 49W
Ambient operating temperature: -10°C to 45°C (14°F to 113°F)
(CCU and CCU adaptor)
Dimensions: CCU: 218(W) $\times$ 128(H) $\times$ 382mm(D)
(8.6 $\times$ 5 $\times$ 15")
CCU adaptor: 77(W) $\times$ 146.5(H) $\times$ 104mm(D)
(3 $\times$ 5.8 $\times$ 4.1")
Weight: CCU: 6.5 kg (14 lb 2 oz)
CCU adaptor: 0.7 kg (1 lb 3 oz)

Digital Command Unit

DCU-300/300P/300PM

(NTSC) (PAL) (PAL-M)



- Long transmission distance
14.5mm Triaxial cable—up to 2500m (8202 ft)
8.5mm Triaxial cable—up to 1200m (3937 ft)
5C-2V coaxial cable—up to 1200m (3937 ft)
3C-2V coaxial cable—up to 700m (2297 ft)
- Radio/telephone links
- Secure data coding
- Compact size
- Optional optical fiber links

Supplied accessories

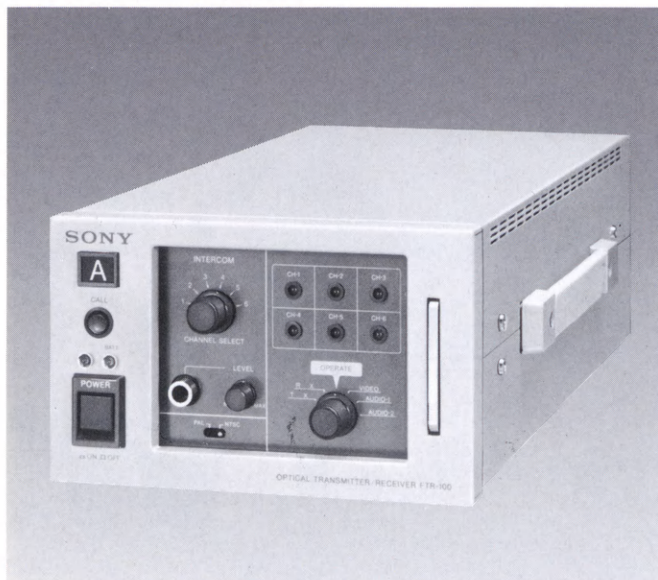
Junction box
Belt
CCW-2 cable (2m)
Extension board A, B
Fuses
Power supply cord
Connector XLR-7P (M, F)
36-pin multi connector
Cramper bracket

Specifications

Power requirements: AC 100/120/220/240V $\pm 10\%$
DC 11.5V to 17V (14V to 17V when the CCW-26 is used)
Power consumption: AC 100W, DC 50W
Dimensions: Camera adaptor: 260(W) $\times$ 235(H) $\times$ 110mm(D)
(10.2 $\times$ 9.3 $\times$ 4.3")
CCU adaptor: 218(W) $\times$ 128(H) $\times$ 379mm(D)
(8.6 $\times$ 5 $\times$ 15")
Weight: Camera adaptor: 3.3 kg (7 lb 4 oz)
CCU adaptor: 6.1 kg (13 lb 7 oz)

CAMERA ACCESSORIES

Optical Fiber Transmission System FTR-100



- Many advantages in use of Optical Fiber Transmission—Minimum signal impairment—Wide bandwidth (Able to handle FPU signals directly)—Lightweight cables—No crosstalk
- Multi Channel Transmission System—up to 6 channels in mixed directions
- Single Multicore Optical Fiber connection (up to 2km length)
- One video and two audio signals for each channel
- Built-in 2/4 wire intercommunications
- Simple change of transmission direction—board exchange only
- AC/DC operation
- BKF-101 Kit required for each channel (contains OTX Transmitter and ORX Receiver)

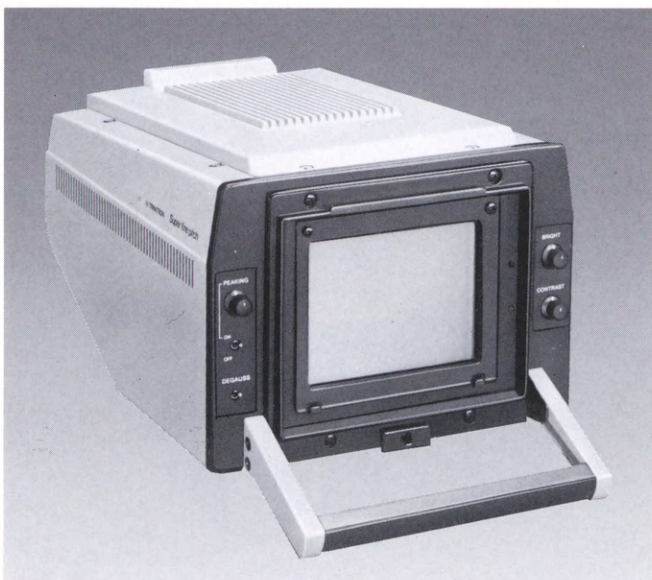
Specifications FTR-100

Power requirement:	AC 90-132/180-240V (50/60Hz) selectable DC 10.8 to 17V 25W(AC)/19W(DC)
Power consumption:	(APL 50%, Audio 0dB out, with six BKF-101s)
Operating temperature:	0°C to 45°C (32°F to 113°F)
Dimensions:	Approx. 200(W) × 120(H) × 411mm(D) (7.9 × 4.7 × 16.2")
Weight:	FTR-100; Approx. 5.8 kg (12.8 lb) OTX; Approx. 290 g (10 oz) ORX; Approx. 310 g (11 oz)
Input/output:	
Video	1Vp-p 75 ohms unbalanced
Audio	–20dBm/0dBm selectable 600 ohms balanced
Intercom input	0dBm, 600 ohms balanced (head set)
Intercom output	–3dBm, 600 ohms balanced (head set)

FC-100 (Optical Multicore Fiber Cable)

Composition:	Optical fiber 6 cores cable length 500m
Weight:	Approx. 32 kg/500m (with reel), 22 kg/500m (without reel)
Optical fiber core:	Type: 80/150μm GI quartz fiber Loss: Less than 4.0dB/km ($\lambda=0.85\mu\text{m}$) Bandwidth: More than 200MHz/km
Cable outer diameter:	6.5mm
Permissible tensile strength:	40 kg

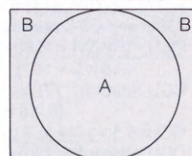
7-inch Color Viewfinder BVF-7000Q



- Specially designed for use with BVP-360—direct camera installation.
- Various camera indications provided in viewfinder
- Wide range of mechanical positioning
- Dimensions and camera interface compatible with BVF-70 7-inch monochrome viewfinder
- High resolution from Super Fine Pitch Trinitron (0.2mm center, 0.25mm side)
- Underscan display
- RGB inputs from camera give high quality color monitoring
- Composite video input for return video display

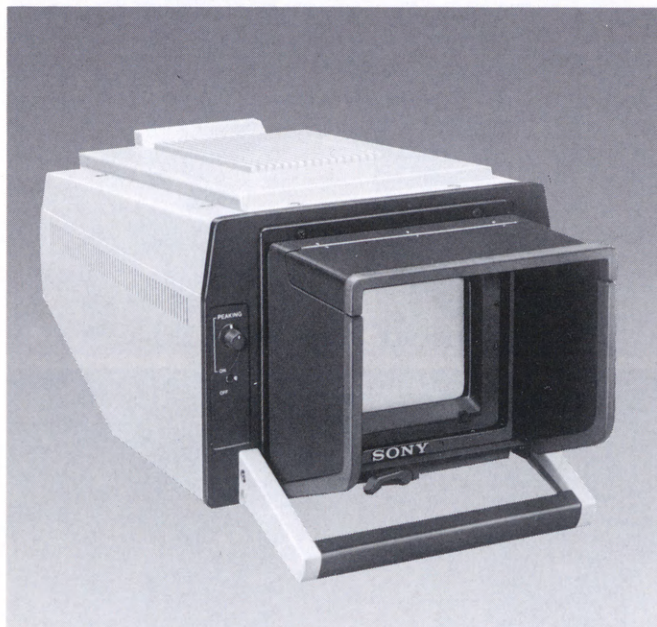
Specifications

Screen size:	120 × 90mm
CRT:	7" (6V), 70° deflection Aperture grill pitch 0.20mm (center) 0.25mm (side)
Color system:	NTSC/PAL/SECAM (system is selected automatically)
Power requirement:	DC 10.7 to 17.0V
Power consumption:	50W (max.)
Tally indication:	Lamp and LED (red, green)
Control functions:	Contrast, Brightness, Peaking, Peaking Switch, Degauss Switch
Resolution:	400 TV lines (center) 350 TV lines (corners) } RGB/Composite
Linearity:	Within 1% of the picture height in ZONE A
Convergence:	Within 0.2mm in ZONE A Within 0.3mm in ZONE B



Stability of raster size:	Within 1% at 0 to 30 fL
Color temperature:	6500°K + 8MPCD
Brightness:	Preset—30 fL Maximum—more than 50 fL
Weight:	7 kg (15 lb 7 oz)
Dimensions:	260(W) × 218(H) × 422mm(D) (10.2 × 8.6 × 16.6")

7-inch B/W Viewfinder BVF-70/70CE



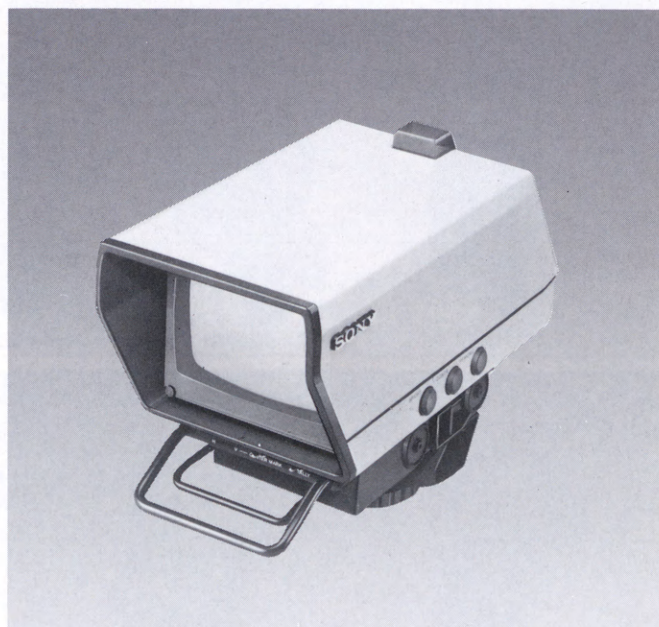
- Specially designed for use with the BVP-360—for direct camera installation
- High resolution, 800 TV lines at center
- Various camera indications provided in viewfinder
- Wide range of mechanical positioning
- Dimensions and camera interface compatible with BVF-7000Q 7-inch color viewfinder

Specifications

Screen size:	120 × 90mm
CRT:	7-inch
	90-degree deflection
Resolution:	800 TV lines at center 600 TV lines at corners
Geometry distortion:	Within 1.0%
EHT voltage:	16Kv typical
Power requirement:	DC 10.7 to 17.0V
Input video:	1.0Vp-p ± 6dB sync negative 75 ohms terminated
DC restoration:	Back porch type Back porch level within 1% of peak luminance from 10% to 90% APL
Weight:	6 kg (13 lb 4 oz)
Dimensions:	260(W) × 218(H) × 422mm(D) (10.2 × 8.6 × 16.6")

5-inch B/W Viewfinder BVF-50/50CE

(EIA) (CCIR)



- 600 TV lines resolution at center
- Adjustable center position marker with ON/OFF switch
- Panning and tilting facility
- Water resistant construction
- Easy installation and handling
- For BVW-1/3A/30, BVP-1/3A/30, and conventional BVP series cameras

Supplied accessories

VF mounting adaptor
Stand × 1
Screws × 4

Specifications

Screen size:	72(H) × 96mm(W) underscan (2.8 × 3.8")
Power requirements:	DC 10V to 17V
Power consumption:	10W
Resolution:	600 TV lines at center 500 TV lines at corners
Picture distortion:	Less than ± 3%
Operating temperature:	-10°C to 50°C (14°F to 122°F)
Weight:	2.2 kg (4 lb 14 oz)
Dimensions:	145.5(W) × 167(H) × 292mm(D) (5.7 × 6.6 × 11.5")

CAMERA BOARD KIT

BK-302 (SECAM Board Kit)

PAL to SECAM conversion kit for BVP-250P/300P/300AP/330P PAL camera.

BK-303 (SECAM Board Kit)

PAL to SECAM conversion kit for CCU-300P PAL camera control unit.

BK-305 (SECAM Board Kit)

PAL to SECAM conversion kit for DCU-300 PAL digital command unit.

BKP-31 (SECAM Board Kit)

PAL to SECAM conversion kit for BVP-3AP/30P PAL camera

BKP-32 (Camera Board Kit)

Dynamic range improvement kit for BVP-3A/30 cameras.
Improves the dynamic range from 400% to 600%, and automatically controls the contrast with the "Dynamic Contrast Control" function.

CONVERSION LENSES

* For more information, please refer to the Canon's or Fujinon's brochures.

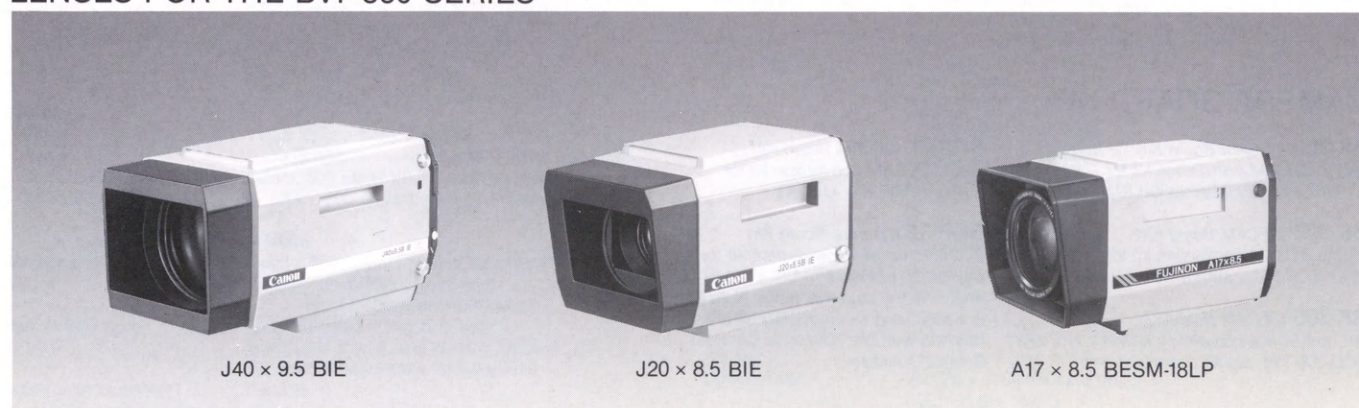
LENSES FOR PORTABLE 3-TUBE CAMERAS



LENSES FOR PORTABLE SINGLE TUBE CAMERAS



LENSES FOR THE BVP-360 SERIES



ZOOM LENSES FOR THE BVP-150/330A/3A/30/BVW-3A/30/105 SERIES

	A7 × 7BRM	A12 × 9BERM	A14 × 9BERM	A18 × 8.5BERM	A22 × 12.5BERM
Focal length	7 - 50mm	9 - 108mm	9 - 126mm	8.5 - 153mm	12.5 - 275mm
Zoom ratio	7 ×	12 ×	14 ×	18 ×	22 ×
Zoom extender	—	2 ×	2 ×	2 ×	2 ×
Maximum aperture ratio	1.7	1.7	1.7	1.7	2.0
Iris control	Auto & manual	Auto & manual	Auto & manual	Auto & manual	Auto & manual
Zooming control	Manual & motorized	Manual & motorized	Manual & motorized	Manual & motorized	Manual & motorized
Minimum object distance	0.3m	0.95m	0.8m	0.9m	1.8m
Range of object field W: (at M.O.D. with 1 ×)	334 × 445mm	658 × 877mm	550 × 733mm	659 × 879mm	894 × 1192mm
T:	48 × 64mm	55 × 73mm	39 × 52mm	37 × 49mm	41 × 54mm
Weight (with lens hood)	1.6 kg (3 lb 8 oz)	1.45 kg (3 lb 3 oz)	1.39 kg (3 lb 1 oz)	1.55 kg (3 lb 6 oz)	3.9 kg (8 lb 12 oz)
Optional remote controller	RM-S2/S2B/S2C: Powered zoom and servo focus RM-S5: Powered zoom and manual focus				

ZOOM LENSES FOR THE BVP-150/330A/3A/30/BVW-3A/30/105 SERIES

	J8 × 6B4 KRS	J13 × 9B4 IRS	J15 × 9.5B4 KRS	J18 × 9B4 IRS	J20 × 8.5BIE
Focal length	6 - 48mm	9 - 117mm	9.5 - 143mm	9 - 162mm	8.5 - 170mm
Zoom ratio	8 ×	13 ×	15 ×	18 ×	20 ×
Zoom extender	—	2 ×	—	2 ×	2 ×
Maximum aperture ratio	1.7	1.6	1.8	1.7	1.6
Iris control	Auto & manual	Auto & manual	Auto & manual	Auto & manual	Remote
Zooming control	Manual & motorized	Manual & motorized	Manual & motorized	Manual & motorized	Remote
Minimum object distance	0.3m	0.8m	1m	0.9m	0.6m
Range of object field W: (at M.O.D. with 1 ×)	385 × 513mm	542 × 722mm	647 × 862mm	602 × 802mm	604 × 819mm
T:	48 × 64mm	42 × 56mm	43 × 57mm	34 × 45mm	30 × 39mm
Weight	1.75 kg (3 lb 12 oz)	1.5 kg (3 lb 5 oz)	1.5 kg (3 lb 5 oz)	1.7 kg (3 lb 12 oz)	8 kg (17 lb 10 oz)
Optional remote controller	MS-21: Powered zoom and manual focus FZ-31: Powered zoom and servo focus				

ZOOM LENSES FOR THE BVW-1/BVP-1 SERIES

	N12 × 9BRM	N14 × 9ERM	J13 × 9C IRS	J15 × 9.5C KRS
Focal length	9 - 108mm	9 - 126mm	9 - 117mm	9.5 - 143mm
Zoom ratio	12 ×	14 ×	13 ×	15 ×
Zoom extender	—	2 ×	2 ×	—
Maximum aperture ratio	1.7	1.7	1.6	1.8
Iris control	Auto & manual	Auto & manual	Auto & manual	Auto & manual
Zooming control	Manual & motorized	Manual & motorized	Manual & motorized	Manual & motorized
Range of object field W: (at M.O.D. with 1 ×)	658 × 877mm	550 × 733mm	542 × 722mm	647 × 862mm
T:	55 × 73mm	39 × 52mm	42 × 56mm	43 × 57mm
Weight	1.3 kg (2 lb 14 oz)	1.5 kg (3 lb 5 oz)	1.45 kg (3 lb 3 oz)	1.5 kg (3 lb 5 oz)

ZOOM LENSES FOR THE BVP-360

	J18 × 8.5BIE	J20 × 8.5BIE	J25 × 11.5BIE	J40 × 9.5BIE	A15 × 8 BESM-18P	A17 × 8.5 BESM-18LP	A18 × 8 BESM-18P	A44 × 9.5 BESM-18LP
Focal length	8 - 144mm	8.5 - 170mm	11.5 - 288mm	9.5 - 380mm	8 - 120mm	8.5 - 145mm	8 - 144mm	9.5 - 420mm
Zoom ratio	18 ×	20 ×	25 ×	40 ×	15 ×	17 ×	18 ×	44 ×
Maximum aperture ratio	1.2	1.6	1.6	1.2	1.5	1.2	1.5	1.2
Minimum object distance	0.6m	0.6m	1.5m	2.5m	0.7m	0.7m	0.7m	2.5m
Weight	27 kg (59 lb 8 oz)	9 kg (19 lb 13 oz)	12 kg (26 lb 7 oz)	30 kg (66 lb 2 oz)	14 kg (30 lb 13 oz)	22.5 kg (49 lb 8 oz)	15 kg (33 lb)	27 kg (59 lb 6 oz)

Notes

1. ANGENIEUX and SCHNEIDER lenses are also available.
2. For further information, please contact the lens manufacturers.

MONITORS

19-inch (20-inch) Color Monitor

BVM-1900A/2000AP

(NTSC)

(PAL)



- Auto setup capability (option)
- Super Fine Pitch Trinitron CRT assures high center resolution of 900 lines at 30 fL
- Stabilized color temperature provided by employing automatic beam control circuit
- Unique picture setup switch facilitates adjustment for accurate alignment
- Up to 8dB aperture correction at 4.5MHz and 9.0MHz selectable
- Pulse cross function is provided to check the horizontal and vertical sync simultaneously
- Matrixed R, G, and B 75-ohm outputs derived from composite inputs
- High impedance decoded R-Y and B-Y chrominance outputs for vector display units
- Equipped for composite A and B inputs, non composite R, G, B, with external sync input, and Test input
- Built-in cross hatch generator
- A lockable pull-out drawer beneath the tube face gives

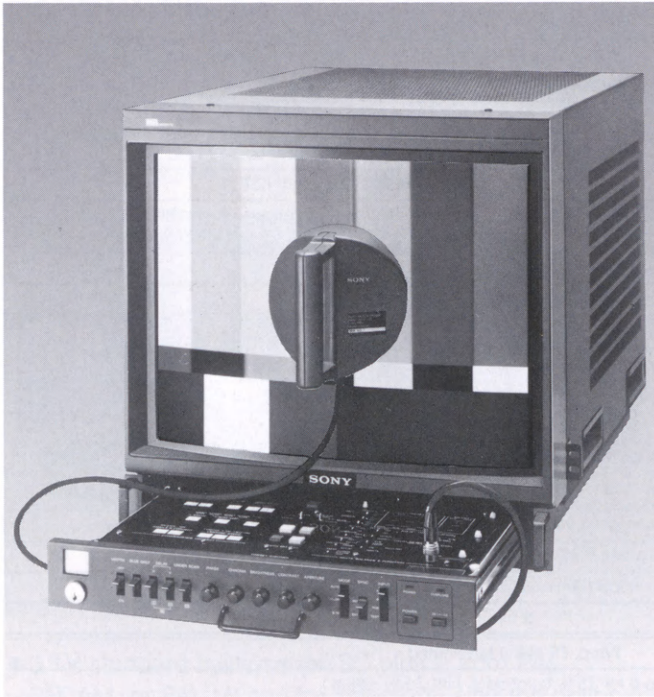
access to convergence, linearity, scan and other controls

- Raster size stability within $\pm 1\%$ from 0 to 100% APL at 30 fL
- Over-drive protection circuit prevents picture tube damage
- 19-inch standard rack mountable
- Comb filter (NTSC)/Notch filter (PAL) employed
- CCD 1H-delay line equipped for color difference signal processing (PAL, SECAM only)
- BVM-2000AP can be modified for use in SECAM areas using the OPK-2000

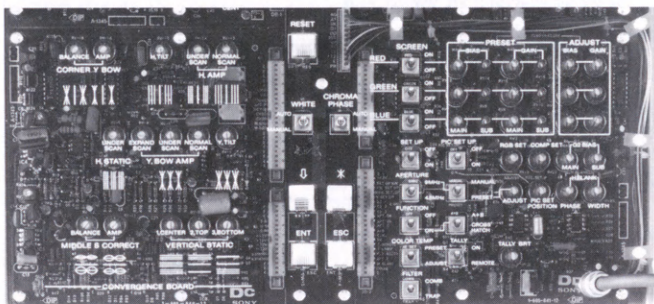
Supplied accessories

AC power cord
Side rails
Slide rail brackets and screws
10-pin connector
Screwdriver
Tally number labels
Fuse
Operation and maintenance manual

MONITOR AUTO SET UP KIT BKM-2050/2052



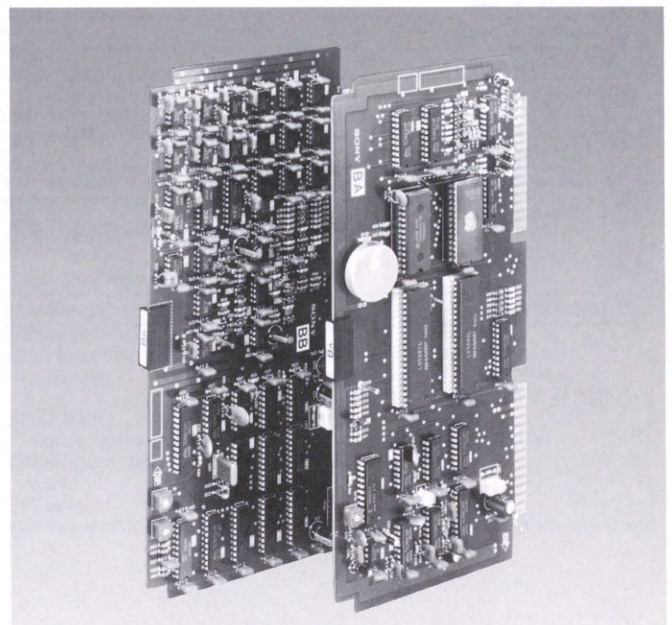
- Automatic adjustment kit for BVM-1900A/2000A series (BKM-2050) monitors provides quick and precise monitor set up within 70 seconds, 60 seconds for color temperature set up, and 10 seconds for chroma adjustments
- Parameters of adjustments
 1. White balance (6500°K and other color temperatures in memory)
 2. Black level, contrast setting
 3. Chroma gain and phase (hue)
- Four color temperature memories in probe (6500°K standard)
- Can match one monitor to another when the monitors are equipped with same type phosphors
- Character generator for operational instructions and error messages
- Auto or manual modes can be selected



Control Panel (in the drawer)



BKM-2052 Probe



BKM-2050 Board kit for BVM-1900A/2000A series

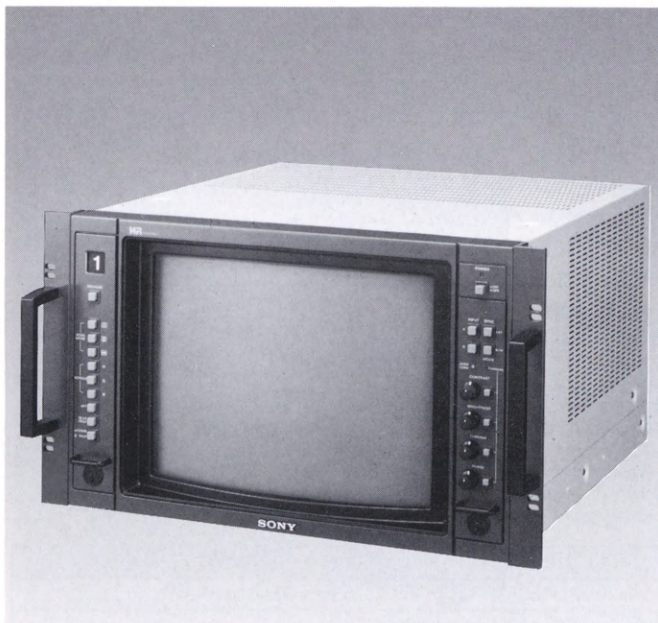
BVM-1900A/2000AP SPECIFICATIONS

		BVM-1900A	BVM-2000AP
General	System	525 lines 60 fields NTSC	625 lines 50 fields PAL/SECAM
	Power requirements	AC 100/120/240V $\pm 10\%$ selectable	
	Power consumption	Typical 248W, Max. 280W	
	Dimensions	480(W) $\times$ 456(H) $\times$ 621mm(D) (19 $\times$ 18 $\times$ 24.5")	
	Weight	49.2 kg (108 lb 7 oz)	
CRT performance	CRT type	Super Fine Pitch In Line Stripe Grille, AG pitch: 0.3mm, Center resolution: 900 TV lines	
	Screen size	Diagonal: 48.2cm (19"), Width: 38.4cm (15.16"), Height: 29.1cm (11.37")	
	Color temperature	PRESET: Factory adjusted for D6500°K white, VARIABLE control is also available which allows alternative setting of color temperature.	
	Preset brightness	0.1 fL (in calibrated position)	
	Preset contrast	30 fL (at 100% white)	
Raster and picture performance	Normal scan	4 $\times$ 3 aspect ratio, Blanked raster $< +5\%$, Raster size has internal adjustment	
	Under scan	4 $\times$ 3 aspect ratio, Approx. -10% , Picture and blanking boundaries displayed	
	Stability of raster size	1% of picture height for a 0 to 100% APL change when 100% peak white set to 30 fL brightness	
	Linearity of center H & V lines	1% of picture height	
	Geometry (all over screen)	1% of the vertical height at central area, 2% any other point	
	Convergence	0.5mm within circle centered on the screen and with a diameter equal to the vertical height, 1.0mm at any other point	
Input performance	R.G.B. VIDEO inputs TEST	0.7Vp-p non-composite or 1Vp-p composite video signal ± 6 dB positive, loop-through, high impedance	
	EXT SYNC inputs	1 to 8Vp-p negative, loop-through, high impedance	
	Return loss	At least 46dB (7MHz with 75 ohms termination)	
	Maximum safe input DC	± 5 V	
Output facility	R.G.B outputs	1Vp-p, 75 ohms terminated	
	R-Y	0.68Vp-p for 75% color bars with 7.5% setup	
	B-Y	0.5Vp-p for 75% color bars with 7.5% setup	
RGB performance	Differential gain	Within 2% for luminance from zero to 30 fL	
	Differential phase	Within 2 degrees for luminance from zero to 30 fL	
	Frequency response	100Hz to 10MHz ± 1 dB	
	DC restoration	Back porch type Back porch level: Within 1% of peak luminance, 10% to 90% APL (Average Picture Level)	
NTSC/PAL performance	Differential gain	Within 2% for a luminance from zero to 30 fL	
	Differential phase	Within 2 degrees for a luminance from zero to 30 fL	
	Frequency response	Monochrome mode 100Hz to 10MHz ± 1 dB (Aperture correction at zero) Color mode Trap or Comb Filter removes frequency in 3.58MHz region	Monochrome mode 100Hz to 10MHz ± 1 dB (Aperture correction at zero) Color mode Notch Filter removes frequency in 4.43MHz region (PAL)
	Aperture correction	Adjustable continuously up to 8dB boost at 4.5MHz or 9MHz (selectable)	

13-inch Broadcast Color Monitor

BVM-1310

(NTSC)



- 3 TV standard systems (NTSC plus 2 from PAL, SECAM, or PAL-M) can be selected using the optional decoder boards (Plug-in type)
- 700 TV lines center resolution at 40 fL.
- Stabilized color temperature obtained by a newly developed beam control circuit
- Unique picture set-up switch for accurate alignment
- Up to 6dB aperture correction at 4.5MHz and 6.5MHz selectable
- Built-in cross hatch and white signal generator (100 IRE)
- Optional component (R-Y, Y, B-Y) and R, G, B input/output facility
- Pulse Cross function for simultaneous checking of horizontal and vertical sync
- Provides EBU or US standard phosphors
- Over Drive Protection circuit prevents picture tube damage
- Raster size stability within 1% from 0 to 40 fL.
- Comb Filter (NTSC), Notch Filter (PAL)
- 19-inch rack mountable

Supplied accessories

AC power cord
10-pin connector
Screwdriver
Fuses and tally number labels
Operation and maintenance manual

Optional accessories

BKM-1411 NTSC Comb Filter Adaptor (supplied with BVM-1310)
BKM-1440 RGB/Component Adaptor
BKM-1460 VITC Adaptor
BKM-1410 Decoder Board (NTSC, supplied with BVM-1310)
BKM-1420 Decoder Board (PAL)
BKM-1421 Decoder Board (PAL-M)
BKM-1430 Decoder Board (SECAM)
BKM-1400 Rack Mount Kit (slide rails, screws)

Specifications

GENERAL

System: 525 lines 60 fields NTSC
Power requirements: AC 100-120/220-240V $\pm 10\%$ selectable
Power consumption: Typical 142W, Max. 160W
Dimensions: 426(W) $\times$ 281.5(H) $\times$ 490mm(D) (16.8 $\times$ 11 $\times$ 18.1")
Weight: 32 kg (70 lb 9 oz)

INPUT PERFORMANCE

VIDEO (A, B): 0.7Vp-p non-composite or 1Vp-p composite video signal
 ± 6 dB positive, loop-through, high impedance
EXT SYNC: 1 to 8Vp-p negative, loop-through, high impedance
Return loss: At least 46dB to 7MHz, 75-ohm termination

OUTPUT PERFORMANCE

Decoder (R-Y): 0.68Vp-p for 75% color bars, high impedance
(B-Y): 0.5Vp-p for 75% color bars, high impedance
RGB (option): 2Vp-p loop-through, high impedance
Component (option): Y 2Vp-p, B-Y/R-Y 1.4Vp-p, loop-through, high impedance

PICTURE PERFORMANCE

Height: 201.5mm
Width: 268.6mm
Under scan: 4 $\times$ 3 aspect ratio, approx. -3% picture and blanking boundaries displayed
Linearity: Less than 0.5% at the center line of horizontal and vertical lines
Geometry distortion: Less than 1% of the picture height
(all over screen)
Convergence error: Less than 0.3mm within the circle centered on the screen and with a diameter equal to the vertical height
Less than 0.6mm at any other area
Color temperature: D 6500°K white, adjustable to other standard
Color temperature stability: Differential variations between R, G, and B are less than 1% over 500 hours
Preset brightness range: From cut off to 1.5 fL
Preset contrast: 40 fL (at 100% white)
Maximum brightness: More than 80 fL

CRT PERFORMANCE

CRT type: 14" Fine Pitch Trinitron
Chromaticity coordinate: US standard phosphor
Pitch: AG (Aperture Grille) pitch 0.25mm
Resolution: Approx. 700 TV lines at center of the screen
Anode voltage: 25kV typical

NTSC PERFORMANCE

Differential gain: Within 2% for luminance from 0 to 40 fL
Differential phase: Within 2° for luminance from 0 to 40 fL
Luminance frequency response: Monochrome mode 100Hz to 8MHz ± 1 dB
Color mode at notch filter -30dB at 3.58MHz
at comb filter 100Hz to 8MHz ± 1.5 dB

Chrominance

demodulator axis: R-Y and B-Y 90° $\pm 1^\circ$ relative to each other
Chrominance band width: 1.3MHz equipband
Y/C delay: Within 30nsec
Aperture correction: Adjustable continuously up to 6dB boost at 4.5MHz and 6.5MHz

MONITORS

12-inch (13-inch) Color Monitor

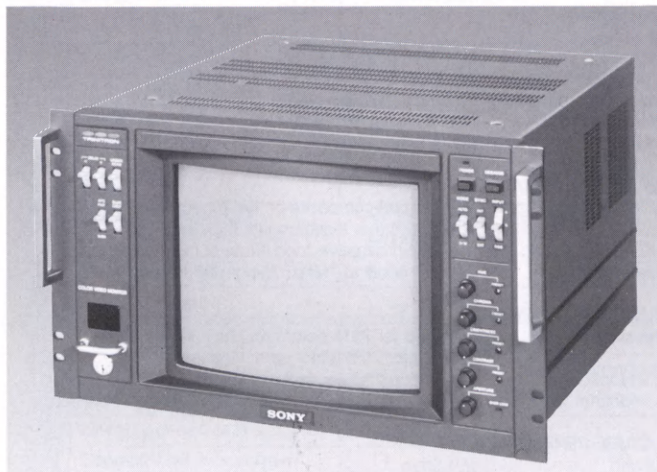
BVM-1201/1301P/1301S/1301PM

(NTSC)

(PAL)

(SECAM)

(PAL-M)



- 600 TV lines center resolution at 20 fL
- Aperture correction, up to 8dB boost at 4.5MHz
- Built-in cross hatch generator
- Inputs for composite video or non-composite R.G.B. with external sync input
- Decoded R-Y and B-Y outputs
- Fast/slow AFC switch
- Automatic color, B/W mode selection
- Over-drive protection circuit prevents picture tube damage
- LED tally lamp with remote control

Supplied accessories

Slide rails, slide rail brackets and screws
AC power cord
10-pin connector
Screwdriver
Voltage indication label
Operation and maintenance manual

SPECIFICATIONS

		BVM-1201	BVM-1301P/1301S	BVM-1301PM
General	System	525 lines 60 fields NTSC	625 lines 50 fields PAL/SECAM	525 lines 60 fields PAL-M
	Power requirements	AC 100/120/220/240V $\pm 10\%$ selectable		
	Power consumption	Typical 136W, Max. 160W	Typical 136W, Max. 160W	Typical 136W, Max. 160W
	Dimensions (cabinet type)	424(W) $\times$ 276(H) $\times$ 454mm(D) (16.7 $\times$ 10.9 $\times$ 17.9")		
	Weight (cabinet type)	26 kg (57 lb 5 oz)		
Input performance	R.G.B. VIDEO inputs	0.7Vp-p non-composite or 1Vp-p composite video signal ± 6 dB positive, loop-through, high impedance	0.7Vp-p non-composite or 1Vp-p composite video signal ± 6 dB positive, loop-through, high impedance	0.7Vp-p non-composite or 1Vp-p composite video signal ± 6 dB positive, loop-through, high impedance
	EXT SYNC inputs	1 - 8Vp-p negative, loop-through, high impedance	1 - 8Vp-p negative, loop-through, high-impedance	1 - 8Vp-p negative, loop-through, high-impedance
	Return loss	At least 46dB to 5MHz with 75 ohm termination (not internally terminated)	At least 46dB to 5MHz with 75 ohm termination (not internally terminated)	At least 46dB to 5MHz with 75 ohm termination (not internally terminated)
	Maximum safe input DC	± 5 V	± 5 V	± 5 V
RGB performance	Differential gain	Within 2% for a luminance from zero to 20 fL	Within 2% for a luminance from zero to 20 fL	Within 2% for a luminance from zero to 20 fL
	Differential phase	Within 2 degrees for a luminance from zero to 20 fL	Within 2 degrees for a luminance from zero to 20 fL	Within 2 degrees for a luminance from zero to 20 fL
	Frequency response	100Hz to 8MHz ± 1 dB	100Hz to 8MHz ± 1 dB	100Hz to 8MHz ± 1 dB
	DC restoration	Back porch type Back porch level within 1% of peak luminance from 10% to 90% APL	Back porch type Back porch level within 1% of peak luminance from 10% to 90% APL	Back porch type Back porch level within 1% of peak Luminance from 10% to 90% APL
Picture performance	Height	182mm (7.16")	182mm (7.16")	182mm (7.16")
	Width	239mm (9.4")	239mm (9.4")	239mm (9.4")
	Underscan	Approximately 10% reduction	Approximately 10% reduction	Approximately 10% reduction
	Linearity	Within a central area bounded by a circle whose diameter equals the picture height, within 1% of the picture height	Within a central area bounded by a circle whose diameter equals the picture height, within 1% of the picture height	Within a central area bounded by a circle whose diameter equals the picture height, within 1% of the picture height
NTSC/PAL performance	Color temperature	6500 degrees K, adjustable to other standards	6500 degrees K, adjustable to other standards	6500 degrees K, adjustable to other standards
	Differential gain	Within 2% for a luminance from zero to 20 fL	Within 2% for a luminance from zero to 20 fL	Within 2% for a luminance from zero to 20 fL
	Differential phase	Within 2 degrees for a luminance from zero to 20 fL	Within 2 degrees for a luminance from zero to 20 fL	Within 2 degrees for a luminance from zero to 20 fL
	Frequency response	Monochrome mode 100Hz to 6.5MHz ± 1 dB (Aperture correction at zero) Color mode Notch filter removes frequency in 3.58MHz region	Monochrome mode 100Hz to 6.5MHz ± 1 dB (Aperture correction at zero) Color mode Notch filter removes frequency in 4.43MHz region (PAL)	Monochrome mode 100Hz to 6.5MHz ± 1 dB (Aperture correction at zero) Color mode Notch filter removes frequency in 4.43MHz region
NTSC/PAL performance	Aperture correction	A continuously adjustable front panel control provides up to 8dB boost at 4.5MHz	A continuously adjustable front panel control provides up to 8dB boost at 4.5MHz	A continuously adjustable front panel control provides up to 8dB boost at 4.5MHz

8-inch (9-inch) Color Monitor (Portable)

BVM-8021/9021ME/9021PM

(NTSC)

(PAL/SECAM)

(PAL-M)



- Suitable for ENG/EPF applications
- High resolution of 400 TV lines at center (composite input)
- Operates with one or two NP-1 battery packs, a 12V car battery, or an AC outlet
- BP-90 capability with optional bracket VLC-100
- Easy connection to TV tuner unit TU-1110 series using the TUNER connector
- Spring loaded control knob prevents control damage
- Normal scan/Under scan select switch
- Blue only mode switch
- H/V delay function displays horizontal and vertical sync signals
- INPUT A or INPUT B (BNC or TUNER) selectable
- Built-in charger for battery pack NP-1 (× 2)
- PAL and SECAM selected automatically (BVM-9021ME only)

Supplied accessories

AC power cord

Hood

Operation and maintenance manual

SPECIFICATIONS

	BVM-8021	BVM-9021ME	BVM-9021PM
Power requirements	AC 120V, 50/60Hz DC 12V with optional NP-1 or DCC-16AW	AC 220/240V, 50/60Hz DC 12V with optional NP-1 or DCC-16AE	AC 120V, 50/60Hz DC 12V with optional NP-1 or DCC-16AW
Power consumption	47W max. (AC) 38W max. (DC)	48W max. (AC) 40W max. (DC)	47W max. (AC) 38W max. (DC)
Video signal	EIA 525 lines, 60 fields	CCIR 625 lines, 50 fields	EIA 525 lines, 60 fields
Color system	NTSC	PAL and SECAM	PAL-M
Picture tube	Microblack Trinitron 22cm (9"), visible picture size 20cm (8") measured diagonally, 70° deflection, AG pitch 0.25mm		
Horizontal resolution	400 TV lines (composite input)		
Color temperature	6500°K		
Frequency response	5.5MHz (−3dB), typical		
Horizontal linearity	8%		
Vertical linearity	8%		
Brightness	More than 30 fL		
Pull in range	Horizontal ±500Hz		
Scan size	Approx. +6% (Normal), Approx. −5% (Underscan)		
H/V delay	Horizontal: Approx. 1/4 line Vertical: Approx. 1/2 field		
Video inputs	[INPUT A], and [INPUT B] or [TUNER] Composite 1.0Vp-p ±6dB, 75 ohms, unbalanced, sync negative, BNC		
Video outputs	[INPUT A], [TUNER] 1.0Vp-p, 75 ohms, unbalanced, sync negative, Loop-through, BNC		
Audio inputs	[INPUT A], and [INPUT B], or [TUNER] −5dB, 47K ohms or more		
Audio outputs	[INPUT A], [TUNER] −5dB, loop-through		
Audio power output	0.8W (at 10% distortion)		
Connectors	BNC for video Mini for audio 6-pin DIN for tuner		
Charging time	Approx. 5 hours using built-in charger		
Operating time	1.5 hours with two NP-1s (full charged)		
Operating temperature	0° to 40°C (32°F to 104°F)		
Dimensions	216(W) × 229(H) × 321mm(D) (8.5 × 11.8 × 12.6")		
Weight	7.2 kg (15 lb 14 oz)		

MONITORS

9-inch Color Monitor (Rack Mount Type)

BVM-9221ME

(PAL/SECAM)



- High resolution of 400 TV lines at center
- PAL/SECAM selectable
- Spring loaded control knob prevents control damage
- Normal scan/Under scan select switch
- Blue only mode switch
- H/V-DELAY function displays horizontal and vertical sync signals
- External sync connection
- Two video inputs (VIDEO A or VIDEO B) selectable
- 19" EIA standard rack mountable, using the optional MB-504 mounting bracket, as a dual monitor

Supplied accessories

AC power cord
Number plates
DIN 4-pin connector
Operation and maintenance manual

Specifications

Power requirements:	AC 198 to 264V, 50/60Hz
Power consumption:	35W
Video signal:	CCIR 625 lines, 50 field
Color system:	PAL and SECAM selected automatically
Picture tube:	Microblack Trinitron 22cm (9"), visible picture size 20cm (8") measured diagonally, 70° deflection, AG pitch 0.25mm
Horizontal resolution:	400 TV lines (composite input)
Color temperature:	6500°K
Frequency response:	5.5MHz (–3dB), typical
Horizontal linearity:	8%
Vertical linearity:	8%
Brightness:	More than 30 fL
Pull in range:	Horizontal ±500Hz
Scan size:	Approx. +6% (Normal), Approx. –5% (Underscan)
H/V delay:	Horizontal: Approx. 1/4 line Vertical: Approx. 1/2 field
Video inputs:	[VIDEO A, B] Composite 1.0Vp-p ±6dB, sync negative or non-composite 0.7Vp-p ±6dB positive, 75 ohms and high impedance switchable, BNC
Video outputs:	[VIDEO A, B] 1.0Vp-p, 75 ohms, unbalanced, sync negative, Loop-through, BNC
External sync input:	4Vp-p ±6dB, negative, 75 ohms and high impedance switchable, BNC
External sync output:	Loop-through, BNC
Input return loss:	5MHz, –30dB (VIDEO A, B)
Connectors:	BNC for video/sync, 4-pin DIN for tally
Dimensions:	216(W) × 219(H) × 319mm(D) (8.5 × 8.6 × 12.6")
Weight:	7.5 kg (16 lb 9 oz)

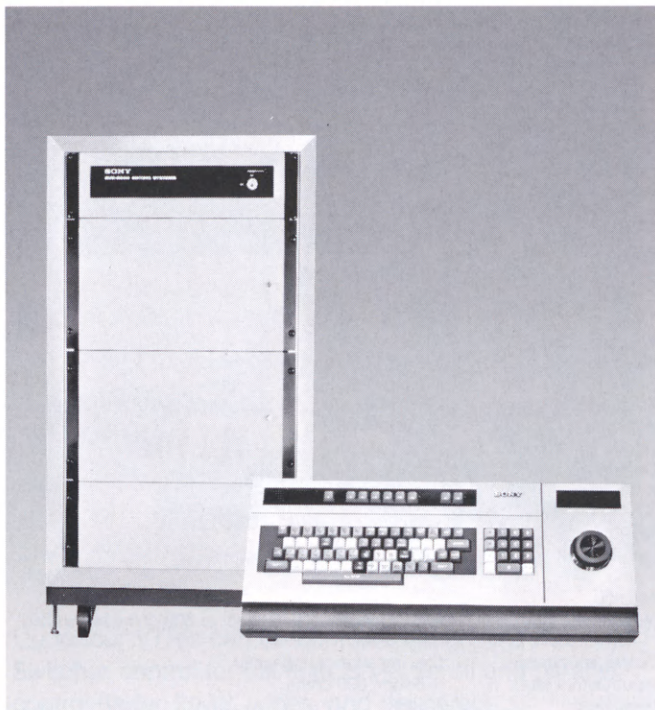
* Available in European market only

Editing System

BVE-5000/5000P

(NTSC)

(PAL)



- Fully integrated system: Powerful CPU with operating program in ROM specifically designed for on-line and off-line editing applications
- SMPTE/EBU LTC and VITC: Automatic selection of SMPTE/EBU time code or VITC provides frame accurate data at any VTR speed including stop motion
- Learn mode: Non-standard speed curve on both "to" and "from" VTRs memorized as part of the edit event
- Look Ahead Search: Anticipates next event in auto edit placing next VTR in preroll
- Auto/Semi-Auto List Clean Up
- Keyboard: In logical function group
- CRT display: Clear, high resolution display or active event; other events easily recalled
- Special effects: Internal special effects generation plus control of external production switchers
- TTY readout: High speed TTY Edit Decision List output with punched paper tape in Sony or CMX format
- Modular construction
- Optimized system
- Integration

Specifications

GENERAL

Keyboard dimensions: 600(W) × 80(H) × 220mm(D)
(23.6 × 3.1 × 8.7")
6 kg (13 lb 4 oz)

Keyboard weight:

Control section dimensions: 570(W) × 1000(H) × 650mm(D)
(22.4 × 39.4 × 25.6")
120 kg (264 lb 9 oz)

Control section weight:

Operating temperature: 5°C to 40°C (41°F to 104°F)

Storage temperature: -10°C to 60°C (14°F to 140°F)

Power consumption: 1.2kVA

SYSTEM

CPU: 8 bit microprocessor, common bus control; operational program in ROM

Operation: Data and source control by keyboard with CRT display of edit data and source status

Time code: SMPTE/EBU Time Code, VITC (Vertical Interval Time Code) with automatic selection and changeover

Edit point: Automatic selection by time code recorded on tape (MARK IN, MARK OUT) or by number (SET IN, SET OUT)

Preview: VVV, BVB, VB, VV, VB, and BV

Auto edit: Follows sequence on edit list, insert and assemble in record mode. Look ahead search minimizes waiting time of record VTR

Edit accuracy: ±0 frame

Keyboard: 57 keys in typewriter order, color coded 15 keys for number inputs and arithmetic computation
7 self lighted keys
BIDIREX search control; shuttle, jog, special effects transaction time
Audible alarm

CRT display: Raster scan 7 × 9 dot matrix, 64 characters × 24 lines
Monochrome display, high resolution, 50/625 non-interlaced

VTR INPUTS AND OPERATING MODES

Inputs: Up to 6 playback VTRs

Outputs: Up to 2 record VTRs (BVH, BVU and BVW VTRs may be mixed in pairs)

Operating modes: Fast forward, Rewind, Stop, Pause, Shuttle, Jog; Record-Insert and Assemble (live outputs from other sources may be used)

TTY terminal: 20 mA current loop or RS-232C

VIDEO

Input/Output impedance: 75 ohms, unbalanced

Input/Output level: 10Vp-p at 75 ohms

Gain: Unity ±0.05

Frequency response: 60Hz to 5.0MHz ±0.3dB

S/N ratio: 60dB 100kHz to 5.0MHz

Differential gain: Less than 1%

Differential phase: Less than 1°

Differential K factor: Less than 1%

AUDIO

Input level: +4dBm balanced, 10K bridging

Output level: +4dBm at 600 ohms, balanced, low impedance

Headroom: 14dB

Gain variation: +0.5dB (1kHz)

Frequency response: 40Hz to 15kHz ±1.5dB (1kHz reference)

Distortion: Less than 0.5% (1kHz nominal level)

S/N ratio: 65dB cut-mode; 60dB effect mode (1kHz nominal level)

BVE-5000/5000P OPTIONAL ACCESSORIES

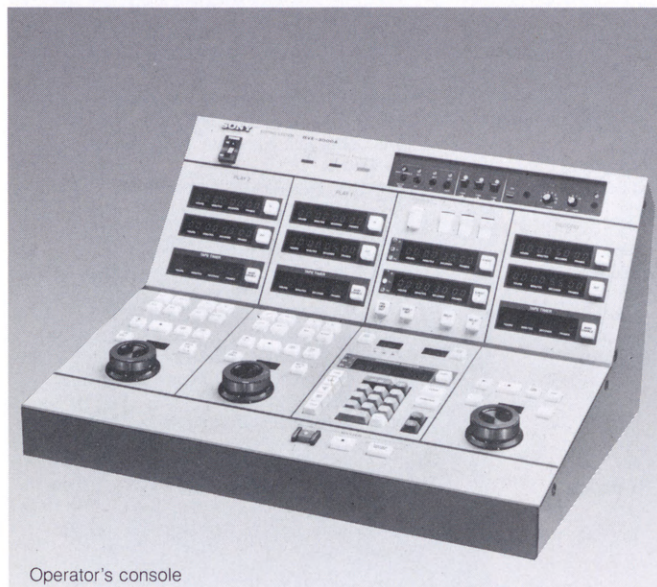
Model	Description	Applicable VTR
BK-5001	Time Code Reader Board	—
BK-5002A	10-pin Interface Board	BVH-1100
BK-5003	36-pin Interface Board	BVU-200
BK-5004	General Purpose Interface Board	—
BK-5005	9-pin Interface Board	BVH-2000 BVU-800/820 BVW-10/40
BK-5006	ATR Interface Board	—
BK-5021	Parallel Switcher Interface Board	—
BK-5022A	Serial Switcher Interface Board	—
BK-5031	RS-232C Interface Board	—
BK-5032	RS-232C Interface Board	—
CPD-5001/5001CE	Computer Display Monitor	—

Editing System

BVE-3000A/3000AP

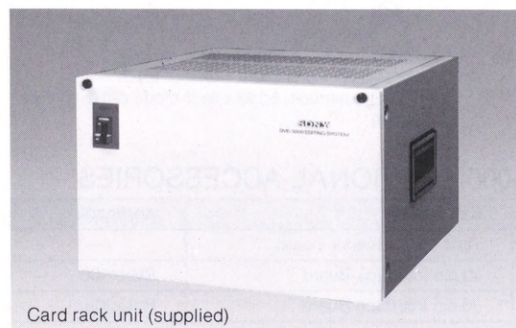
(NTSC)

(PAL)



Operator's console

- Three-VTR editing with A/B roll capability
- SMPTE/EBU time code and VITC editing
- Editing console designed to reduce operator keystrokes
- Dynamic motion control
- Automatic synchronous preview and record modes
- Edit memory and list management (with SMC-70 or TTY)
- External/Internal switcher control
- Color framing
- Software based diagnostic routines



Card rack unit (supplied)

Specifications

GENERAL

Power requirements:

Operator's console: AC 100 to 240V, 48 to 64Hz, 130W

Card rack unit: AC 100 to 240V, 48 to 64Hz, 180W

Operating temperature: 5°C to 40°C (41°F to 104°F)

Storage temperature: -20°C to 60°C (-4°F to 140°F)

Humidity: 10 to 90% RH, non-condensing

Dimensions:

Operator's console: 597(W) × 318(H) × 521mm(D) (23.5 × 12.5 × 20.5")

Card rack unit: 429(W) × 280(H) × 521mm(D) (16.9 × 11.0 × 20.5")

Weight:

Operator's console: 24.6 kg (54 lb 4 oz)

Card rack unit: 32.8 kg (72 lb 5 oz)

VIDEO

Input/Output: 1.0Vp-p, 75 ohms, unbalanced

Gain: 1.0Vp-p ± 0.05V

Frequency response: 25Hz to 6.0MHz ± 0.3dB with 1.0MHz reference

S/N ratio: Better than 60dB

Differential gain: Less than 1%

Differential phase: Less than 1°

K factor: Less than 1%

REFERENCE

Input/Output: 1.0Vp-p, 75 ohms, unbalance

AUDIO

Input impedance: High impedance, balanced, or 600 ohms terminated (selectable)

Output impedance: Low impedance, balanced

Input/Output level: +8dBm, 600 ohms

Headroom: 12 dB

Gain: 0dB ± 0.5dB, 1kHz

Gain variation: ± 0.5dB, 1kHz

Frequency response: 30Hz to 20kHz ± 0.5dB (1kHz reference)

Distortion: Less than 0.2% (1kHz nominal level)

S/N ratio: Better than 65dB in cut and effect (1kHz nominal level)

Crosstalk: Better than -65dB (1kHz reference)

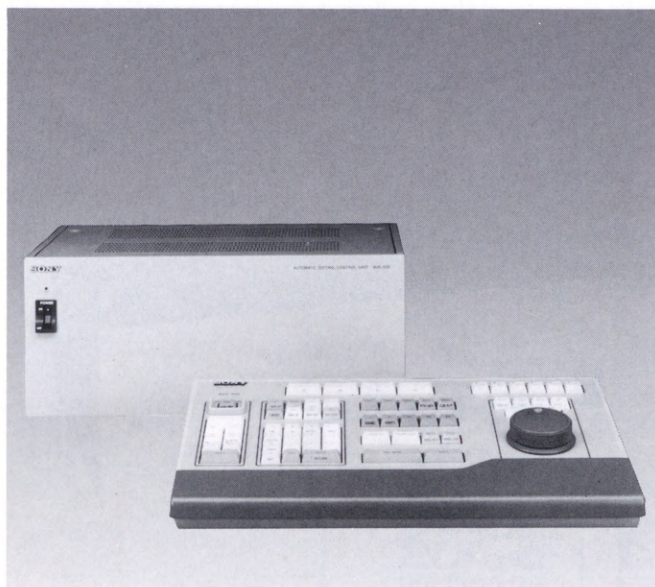
BVE-3000A/3000AP OPTIONAL ACCESSORIES

Model	Description	Applicable VTR
BKE-3002A	Internal Switcher Interface Board	—
BKE-3005	External Switcher Interface Board	—
BKE-3006	CRT/TTY Interface Board	—
BKE-3007	External Switcher Serial Interface board	—
BK-1002	36-pin Interface Board	BVU-200 series

Editing Control Unit

BVE-900

(NTSC/PAL)



- Up to four VTR's can be controlled in an A/B Roll edit.
- Switcher control for full effects via Serial and parallel control (fader, keyer, wipes, and dissolves).
- Audio mixer control
- 2 Auxiliary sources
- VITC, LTC and CTL control
- Dynamic motion control
- Non volatile memory for storing user selectable system setup parameters.
- NTSC or PAL color framed edits
- Cue tone record/playback
- Advanced graphic effect mode display
- Synchronization accuracy selection provides synchronization using various time code grades, or no time code at all.
- Flexible VTR selection as a player or the recorder.
- Automatic time tracking allows automatic calculation of the player matched frame.

Specifications

Power requirements:	AC 100 to 24V $\pm 10\%$, 48Hz to 64Hz
Power consumption:	50W max. including all BKE boards
Operating temperature:	0°C to 45°C (32°F to 113°F)
Storage temperature:	-20°C to 60°C (-4°F to 140°F)
Weight:	Keyboard 2.5 kg (5 lb 8 oz) Card file unit 9 kg (19 lb 13 oz)
Dimensions:	Keyboard 424(W) $\times$ 53(H) $\times$ 275mm(D) (16.7 $\times$ 2.1 $\times$ 10.8") Card file unit 424(W) $\times$ 175(H) $\times$ 262mm(D) (16.7 $\times$ 6.9 $\times$ 10.3")
Video/Reference signal:	External sync input 0.2 to 5.0Vp-p sync or 1.0V ± 0.2 Vp-p video signal, 75 ohms Reference video input 1.0V ± 0.2 Vp-p, 75 ohms (with BKE-901 or 902) Field reference input (PAL only) Nominal 4.0Vp-p, 1.5k ohms Negative going edge in line 1 through line 15 of field 1 (with BKE-902) VDU output 1.0V ± 0.3 Vp-p, 75 ohms
Cue tone signal (BKE-903):	Frequency 1kHz (Begin cue), 400Hz (End cue) Cue audio in/out +4dB, 600 ohms, XLR 3-pin, balanced
Operation:	Data and source controlled by keyboard with VDU display of edit data and source status
Edit reference:	Control track signal, SMPTE/EBU LTC (Longitudinal Time Code), VITC (Vertical Interval Time Code)
Edit accuracy:	± 0 frame with time code operation (normal play mode)
Edit list:	128 edits
GPI:	3 ports, programmable pulse output
External edit control:	RS-232C, programmable BAUD rate and bit
VDU:	6 $\times$ 7 dot matrix, 80 characters $\times$ 24 lines

BVE-900 OPTIONAL BOARD KIT

Model	Description	Applicable equipment
BKE-901	NTSC Color Framing Detector	—
BKE-902	PAL Color Framing Detector	—
BKE-903	Cue Tone Rec/PB Adaptor	—
BKE-904	9-pin Interface	BVU-800 series, BVW series, BVH-2000 series VTRs
BKE-911	Parallel Switcher Interface	BVS-500
BKE-912	Serial Switcher Interface	GVG-100/1680 series
BKE-915	Serial Switcher Interface	SEG-2550
BKE-916	Parallel Mixer Interface	MXP-29/2000 Audio Mixer

BVE-900 OPTIONAL CABLES

RCC-30K Keyboard cable:	BVE-900 Keyboard $\leftrightarrow$ Card file unit, 30m, 8-pin
RCC-30V Switcher control cable:	BKE-915 $\leftrightarrow$ SEG-2550, 30m, 25-pin
RCC-30A Mixer control cable:	BKE-916 $\leftrightarrow$ MXP-29/2000, 30m, 15-pin

Edit Control Unit **BVE-800** (NTSC/PAL/SECAM/PAL-M)



- Time code/CTL editing
- Three-VTR editing with A/B roll
- Quick access to edit point
- Ten-key Input/Scratchpad register
- Multi-event memory
- Auto search function
- First edit function
- Split editing
- Cue-tone recording/playback

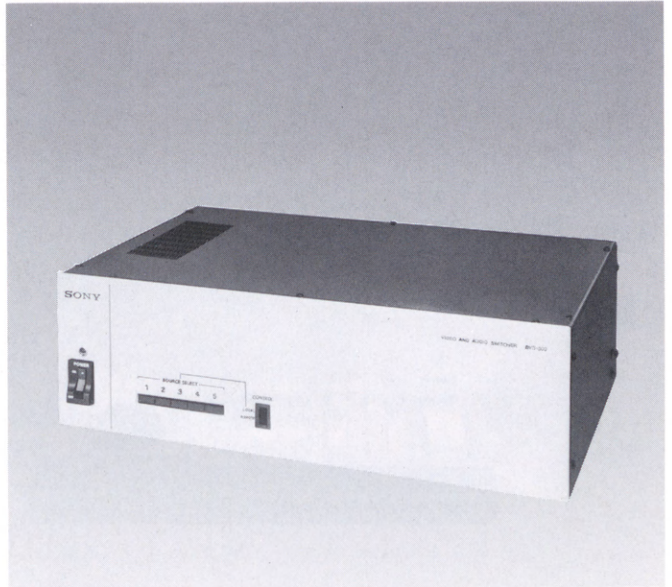
Supplied accessories

AC power cord
Extension board
Dust cover
Operation and maintenance manual

Specifications

Power requirements: AC 100 to 240V, 50/60Hz
Power consumption: 75W (max.)
Weight: 13.3 kg (29 lb 5 oz)
14.5 kg (31 lb 15 oz) with BK board mounted
Operating temperature: 5°C to 40°C (41°F to 104°F)
Storage temperature: -20°C to 60°C (-4°F to 140°F)
Dimensions: 424(W) × 190(H) × 550mm(D) (16.6 × 7.5 × 21.7")

Video/Audio Switcher **BVS-500**



- Five Video/Audio input selection
- External sync input
- Cue-tone recording
- 19-inch rack mountable
- Remote switcher for BVE-800/900

Supplied accessories

AC power cord
Screws for rack mounting
Washers
Operation and maintenance manual

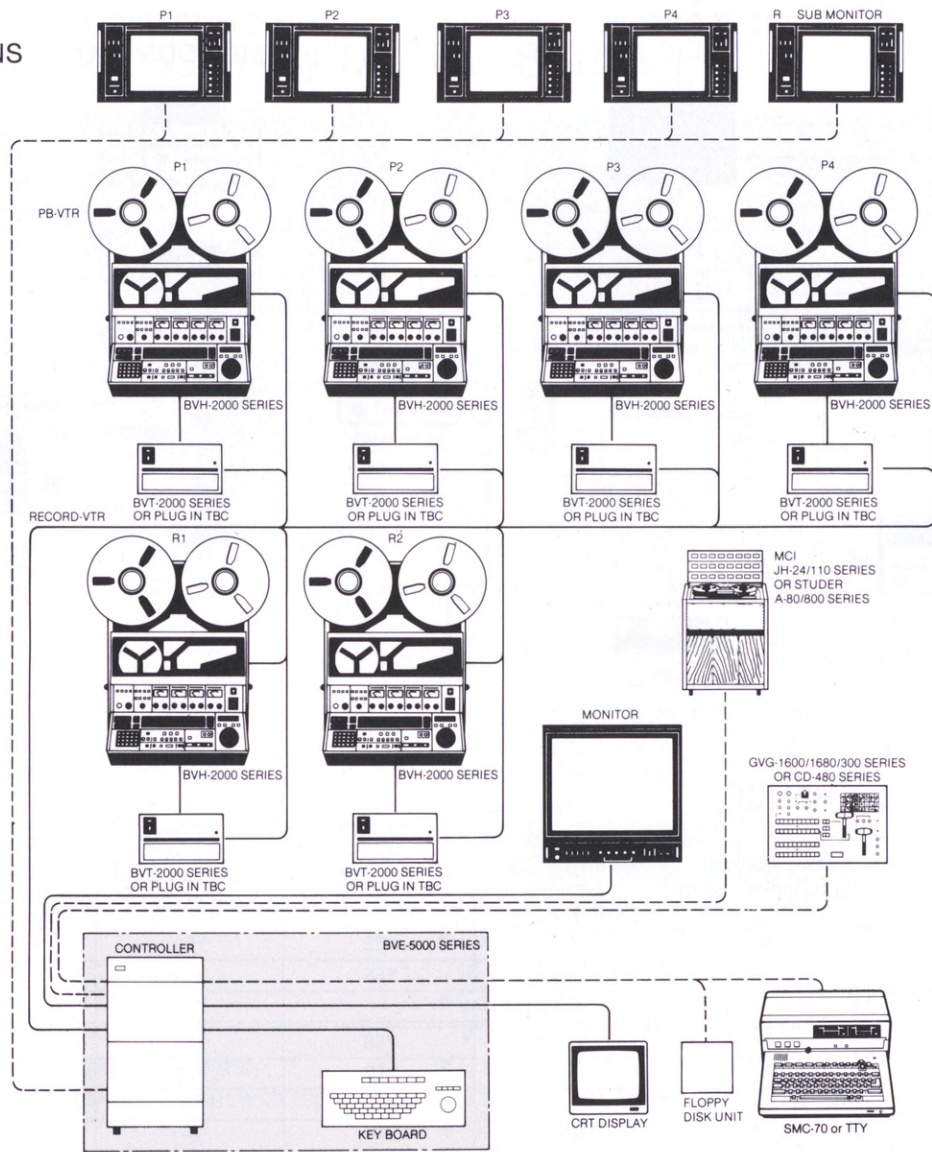
Specifications

Dimensions: 424(W) × 126(H) × 280mm(D) (16.7 × 5 × 11")
Weight: 8.9 kg (19 lb 10 oz)
Power requirements: AC 100/110/120/127/220/240V ±10% (selectable)
50/60Hz
Power consumption: 20W
Operating temperature: 5°C to 40°C (41°F to 104°F)
Storage temperature: -20°C to 60°C (-4°F to 140°F)

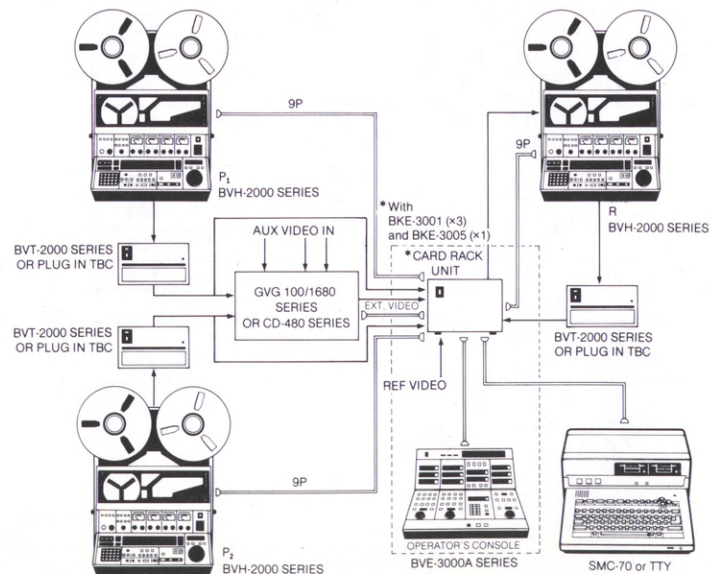
BVE-800 OPTIONAL ACCESSORIES

Model	Description	Applicable VTR
BK-807	9-pin interface board	BVU-800/820/850 BVW-10/15/40
BK-808	36-pin recorder interface board	BVU-200
BK-809	36-pin player interface board	BVU-200
BK-810	Cue tone REC/PB board	—
RCC-5C	BVS-500 remote cable (20-pin)	—
BVS-500	Video/audio switcher	—

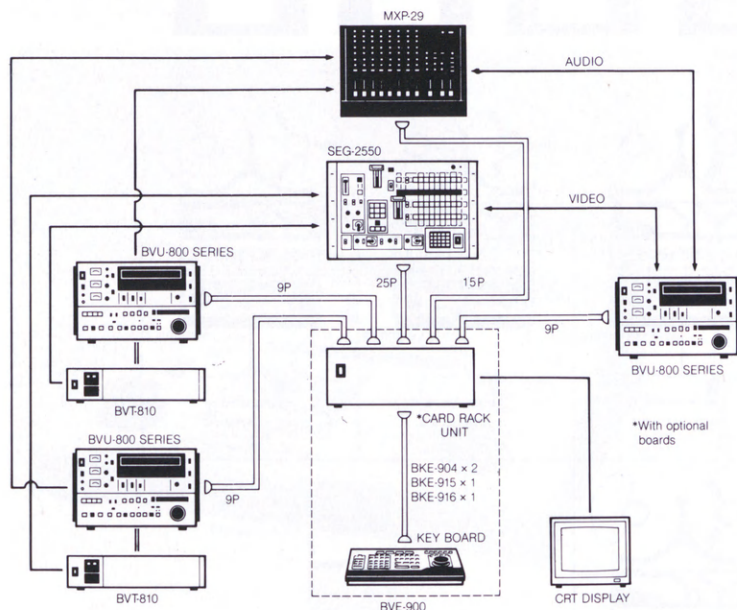
BVE-5000/5000P TYPICAL CONNECTIONS



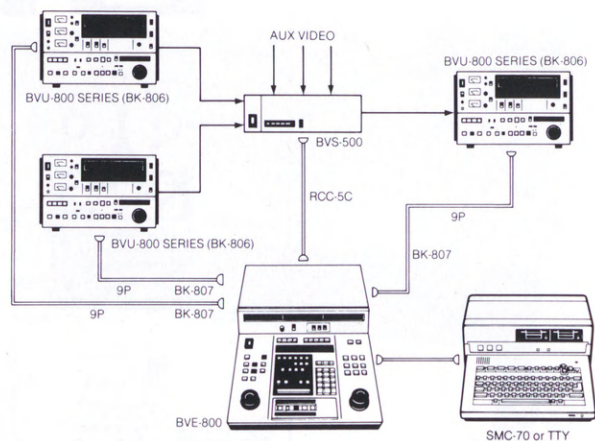
BVE-3000A/3000AP TYPICAL CONNECTIONS



BVE-900 TYPICAL CONNECTIONS



BVE-800 TYPICAL CONNECTIONS (TIME CODE EDITING)



FEATURE REFERENCE

(As of April 1986)

Model	BVU-800/850, with built-in editor	BVH-2000, with BKH-2013 Type-III control panel	BVE-800	BVE-3000A	BVE-900	BVE-5000
Main feature						
CTL reference	YES	YES	YES	YES	YES	—
LTC reference	YES	YES	YES	YES	YES	YES
VITC reference	—	YES	—	YES	YES	YES
2-machine control	YES	YES	YES	YES	YES	YES
3-machine control	—	—	YES	YES	YES	YES
4-machine control	—	—	—	—	YES	YES
8-machine control	—	—	—	—	—	YES
Color framing	—	YES	YES	YES	YES	YES
CRT interface	—	—	—	YES	YES	YES
TTY interface	—	—	YES	YES	YES	YES
SEG interface	—	—	—	YES	YES	YES
Internal switcher	—	—	—	YES	—	YES
Sync roll	—	—	—	YES	YES	YES
10-key board	—	YES	YES	YES	YES	YES
Slave lock	—	YES	YES	YES	YES	YES
Audio split edit	—	YES	YES	YES	YES	YES
Multi-event memory	—	—	YES	YES	YES	YES
List management	—	—	—	YES	YES	YES
DT interface	—	YES	—	YES	YES	YES
* E-MEM interface	—	—	—	—	YES	YES
ATR interface	—	—	—	—	YES	YES
GPI interface	—	—	—	YES	YES	YES

* Trademark of Grass Valley Group Inc.

TIME BASE CORRECTORS

Digital Time Base Corrector

BVT-2000/2000P/2000S/2000PM
(NTSC) (PAL) (SECAM) (PAL-M)



- For BVH-2000/2180/2500/2800/2830 1-inch VTRs
- Correction range of 12Hp-p (NTSC/PAL-M)
- Correction range of 20Hp-p (PAL/SECAM)
- Dynamic Tracking playback with BVH-1100/1100A/1180/2000/2180/2500/2800/2830 series and BVU-820 series VTRs
- 9 bits (NTSC/PAL-M), 8 bits (PAL/SECAM), 4 × fsc sampling
- 1H prior drop-out compensation with digital Y/C separation
- Built-in velocity error compensation
- Built-in sync generator
- Built-in video processor
- Built-in automatic advanced sync generator
- Synchronized to external reference signal with high and low tape speed
- Simultaneous playback monitoring
- Remote control facility

Supplied accessories

AC power cord
Extension board
Rack mount metals
CCY cable
Operation and maintenance manual

Optional accessories

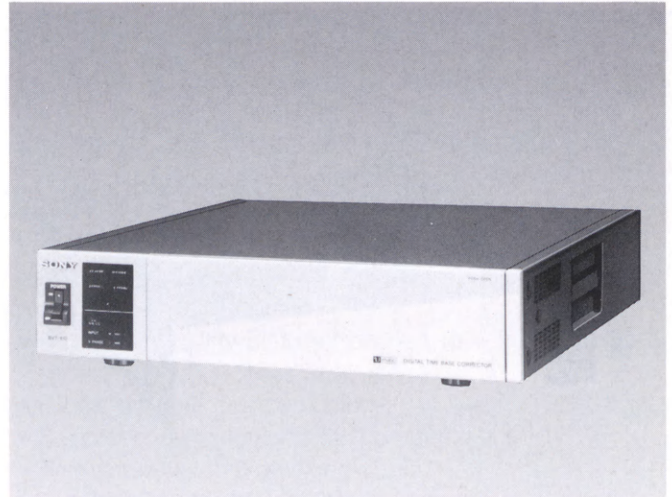
BK-2001 8-line memory board for NTSC
BK-2003 NTSC heterodyne color processor
BK-2004 PAL heterodyne color processor
BK-2005 PAL-M heterodyne color processor
BK-2006 NTSC remote control unit
BK-2007 PAL remote control unit
BK-2008 PAL-M remote control unit

Specifications

Power requirements: AC 100/120/220/240V ±10% selectable, 48 - 64Hz
Power consumption: 620W
Operating temperature: 0°C - 40°C (32°F to 104°F)
Humidity: 10% - 90% non-condensing
Weight: 40 kg (88 lb)
Dimensions: 424(W) × 265(H) × 586mm(D)
(16.7 × 10.4 × 23")

Digital Time Base Corrector

BVT-810/810P
(NTSC) (PAL)



- TBC for capstan servo color under VTRs
- Equipped with a newly developed chroma noise reduction circuit which improves the chrominance signal-to-noise ratio by 2 to 6dB
- Built-in chroma enhancer gives clearer and sharper pictures (PAL)
- Compact and lightweight
- 15Hp-p window correction (NTSC)
- 29Hp-p window correction (PAL)
- DT operation with BVU-820 series U-matic VTRs (-1 to +3 times normal speed)
- Connection with BVU-800/820/850 series U-matic VTRs with one multicore cable
- 8 bits, 3 × fsc sampling (NTSC)
8 bits, Y: 10.9MHz / C: 5.4MHz sampling (PAL)
- Recognizable B/W picture up to ±40 times normal speed
- Built-in digital DOC
1H (NTSC)/Y-1H, C-2H (PAL) prior
- Remote control capability
- Selectable vertical blanking
NTSC: 10 to 21H
PAL: 7 to 22H

Supplied accessories

Multicore cable
Extension cord
Rack mount metals
Operation and maintenance manual

Specifications

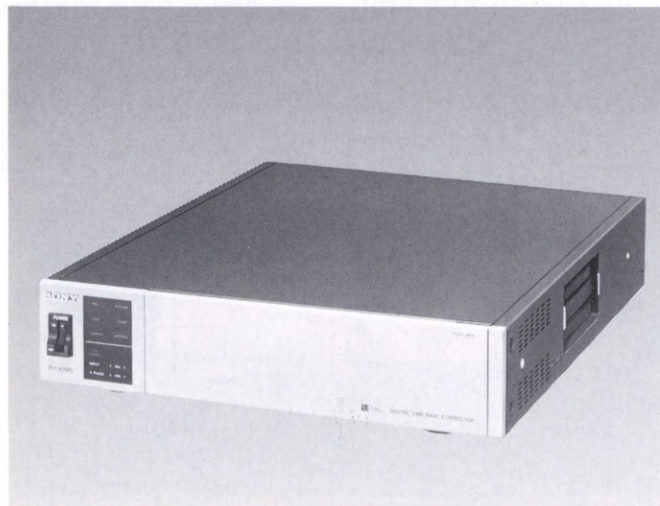
Power requirements: AC 100-120V (90-132V)/220-240V (198-264V)
50/60Hz (48-62Hz)
Power consumption: 95W (NTSC), 120W (PAL)
Operating temperature: 0°C to 40°C (32°F to 104°F)
Storage temperature: -10°C to +60°C (14°F to 140°F)
Humidity: 10% - 90%
Dimensions: BVT-810; 424(W) × 88(H) × 515mm(D)
(16.7 × 3.5 × 20.3")
BVT-810P; 424(W) × 132(H) × 515mm(D)
(16.7 × 5.2 × 20.3")
Weight: BVT-810; 12.5 kg (27 lb 9 oz)
BVT-810P; 15 kg (33 lb 1 oz)

TIME BASE CORRECTORS

Digital Time Base Corrector

BVT-800PS(S)

(SECAM)



- TBC for capstan servo color under VTRs
- Compact and lightweight
- 29Hp-p window correction
- DT operation with BVU-820 series (– 1 to 3 times normal speed)
- Connection with one multicore cable for BVU-800/820 series U-matics
- 8 bits, Y: 10.9MHz/C: 5.4MHz sampling
- Recognizable B/W picture up to ± 40 times normal speed
- Built-in digital DOC (Y-1H, C-2H Prior)
- Remote control capability
- Selectable V-blanking

Supplied accessories

Multicable
Extension cord
Rack mounting metals
Operation and maintenance manual

Optional accessories

BKT-801 PAL sync generator board
BKT-802 SECAM sync generator board

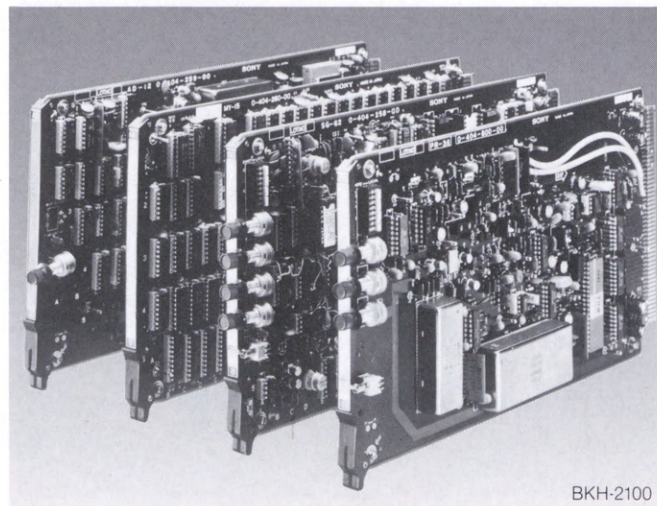
Specifications

Power requirements: AC 100 - 120V (90 - 132V)/220 - 240V (198 - 264V)
50/60Hz (48 - 62Hz)
Power consumption: 100W
Operating temperature: 0°C to 40°C (32°F to 104°F)
Storage temperature: – 10°C to 60°C (14°F to 140°F)
Humidity: 10 - 90%
Dimensions: 424(W) × 88(H) × 515mm(D)
(16.7 × 3.5 × 20.2")
Weight: 13 kg (28 lb 11 oz)

Digital Time Base Corrector for BVH-2000/2180/2800/2830 series

BKH-2100/2300/2400

(NTSC) (PAL/SECAM) (PAL-M)



BKH-2100

- Plug-in TBC for BVH-2000/2180/2800/2830
- Consists of 4 circuit boards (plug-in type)
- PAL/SECAM switch selectable (BKH-2300)
- 1Hp-p window correction
- 8 bits, 4 × fsc (NTSC/PAL/PAL-M)
8 bits, 1135 fH (SECAM) sampling frequency
- Recognizable B/W picture, up to ± 50 times normal speed
- Digital dropout compensation
- Second order velocity error compensation
- Selectable vertical blanking
NTSC/PAL-M: 10H to 21H
PAL/SECAM: 7H to 22H
- Full remote control capability

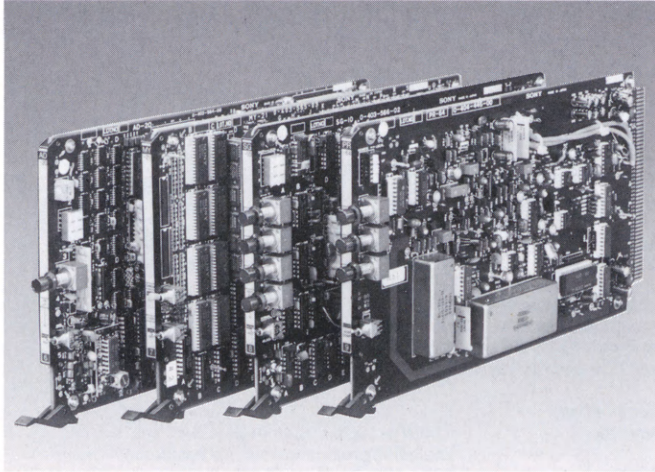
Specifications

Dimensions: 23(W) × 155(H) × 325mm(D) each board
(0.9 × 6.1 × 12.7")
Total weight: 2.5 kg (5 lb 8 oz)/four boards
Operating temperature: 5°C to 40°C (41°F to 104°F)
VIDEO
Frequency band width: DC to 4.2MHz ± 0.3 dB (NTSC, PAL-M)
DC to 5.0MHz ± 0.3 dB (PAL/SECAM)
S/N: 55dB (NTSC)/53dB (PAL/SECAM, PAL-M)
DG: Less than 2%
DP: Less than 2°
K-factor: Less than 1%
Window: 1Hp-p
Residual error (color): Within ± 2.5 nsec (NTSC, PAL-M)
 ± 3.0 nsec (PAL)
Residual error: Within ± 15 nsec
(BKH-2300, SECAM or monochrome)
Y/C delay: Within 20 nsec
Processor-adjustable range
Output video level: ± 3 dB
Output chroma level: ± 3 dB
Setup level/black level: 0 to 15 IRE (NTSC, PAL-M)/
0 to 100mV (PAL/SECAM)
Hue/chroma burst phase: $\pm 15^\circ$ (NTSC)/ $\pm 10^\circ$ (PAL, PAL-M)
System SC phase: More than 360°
System sync phase: – 1 to +3 μ sec

Digital Time Base Corrector with Dynamic Tracking

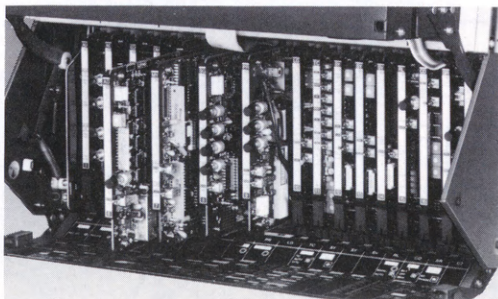
BKH-2150/2350/2450

(NTSC) (PAL/SECAM) (PAL-M)



- Plug-in TBC for BVH-2000/2180/2800/2830
- Consists of 4 circuit boards (plug-in type)
- PAL/SECAM switch selectable (BKH-2350)
- 15Hp-p correction window
- 9 bits 4 × fsc (NTSC), 8 bits 4 × fsc (PAL/PAL-M)
8 bits 1135 fH (SECAM) sampling frequency
- Recognizable monochrome picture up to ± 50 times normal speed
- Recognizable color picture up to ± 8 times normal speed
- Broadcast quality picture from - 1 to + 3 times normal speed
- Digital dropout compensation
- Second order velocity error compensation
- Selectable vertical blanking
NTSC/PAL-M: 10H to 21H
PAL/SECAM: 7H to 22H
- Full remote control capability

BVH-2000 series Mini Console



Specifications

Dimensions:	23(W) × 155(H) × 325mm(D) each board (0.9 × 6.1 × 12.7")
Total weight:	2.5 kg (5 lb 8 oz)/four boards
Operating temperature:	5°C to 40°C (41°F to 104°F)
VIDEO	
Frequency bandwidth:	DC to 4.2MHz ± 0.3dB (NTSC, PAL-M) DC to 5.0MHz ± 0.3dB (PAL/SECAM)
S/N:	NTSC 58dB PAL/SECAM, PAL-M 53dB
DG:	Less than 2%
DP:	Less than 2°
K Factor:	Less than 1%
Window:	15Hp-p
Residual error (color):	Within ± 2.5 nsec (NTSC, PAL-M) Within ± 3.0 nsec (PAL) Within ± 15.0 nsec
Residual error (BKH-2350, SECAM or monochrome)	
Y/C Delay:	Within 20 nsec
Processor Adjustment Ranges	
Output video level:	± 3dB
Output chroma level:	± 3dB
Setup level/black level:	0 to ± 15 IRE (NTSC, PAL-M) 0 to ± 100mV (PAL/SECAM)
Hue/chroma burst phase:	± 15° (NTSC) ± 10° (PAL/SECAM, PAL-M)
System SC phase control:	More than 360°
System sync phase:	- 1 to + 3μsec

TIME CODE GENERATORS/READERS

Portable Time Code Generator

BVG-100/100PS

(NTSC/PAL-M)

(PAL/SECAM)



- LTC and VITC generator for portable 1-inch and portable U-matic recorders
- Normal speed LTC reader function
- Slave/extrapolation capability
- Color frame lock
- Error concealment capability
- Hold/remote hold function
- User bits

Supplied accessories

6-pin cable plug for remote control

Reference labels (hexadecimal number and tens frame digit notation)

Operation and maintenance manual

Specifications

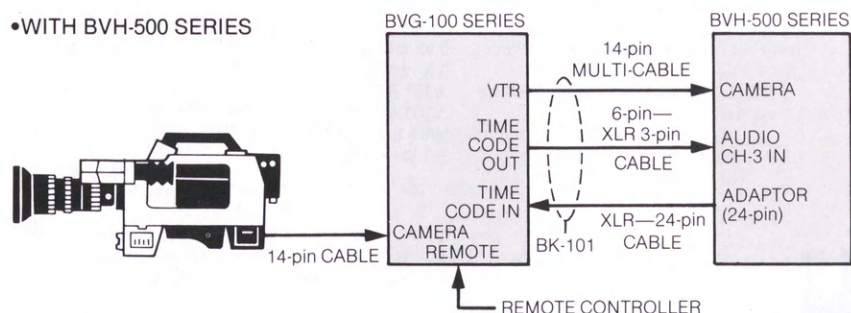
Dimensions: 114(W) × 50(H) × 154mm(D) (4.5 × 2 × 6")
(including projecting parts and controls)
Weight: 700 g (1 lb 9 oz) including battery
Operating temperature: 0°C to 40°C (32°F to 104°F)
Storage temperature: -20°C to 60°C (-4°F to 140°F)
Power requirements: DC 9V to 18V, supplied from VTR or battery (6F22)
Power consumption: 10mA max.
When POWER is off 0.4mA max.
When light is on 70mA max.

BVG-100 SERIES OPTIONAL ACCESSORIES

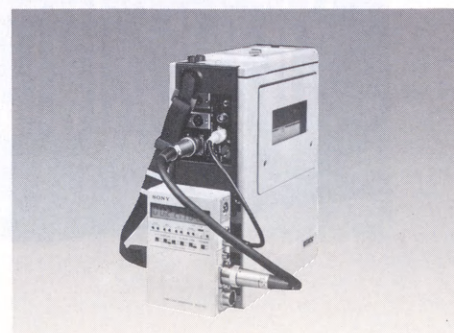
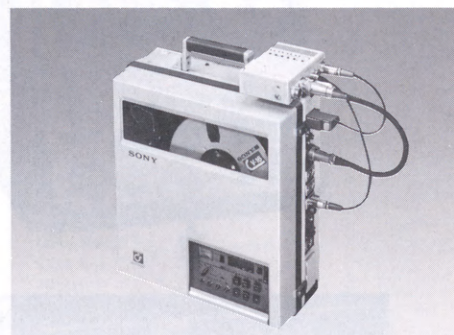
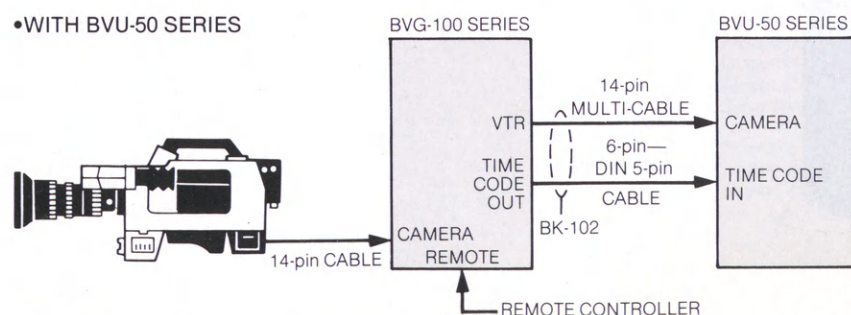
BK-101	BK-102	BK-103
Interface kit for BVH-500 series	Interface kit for BVU-50 series	Interface kit for BVU-100 series
14-pin—14-pin multicable (connecting to VTR, 0.4m) 6-pin—XLR 3-pin cable (time code output cable, 0.36m) XLR 3-pin—24-pin cable (time code input cable, 0.23m) Mounting plate	14-pin—14-pin multicable (connecting to VTR, 0.4m) 6-pin—DIN 5-pin cable (time code output cable, 0.23m) Mounting adaptor Mounting plate	14-pin—10-pin/XLR 3-pin cable (connecting to VTR, 0.4m) 6-pin—DIN 5-pin cable (time code output cable, 0.23m) Mounting adaptor Mounting plate

BVG-100 SERIES TYPICAL CONNECTIONS

•WITH BVH-500 SERIES



•WITH BVU-50 SERIES

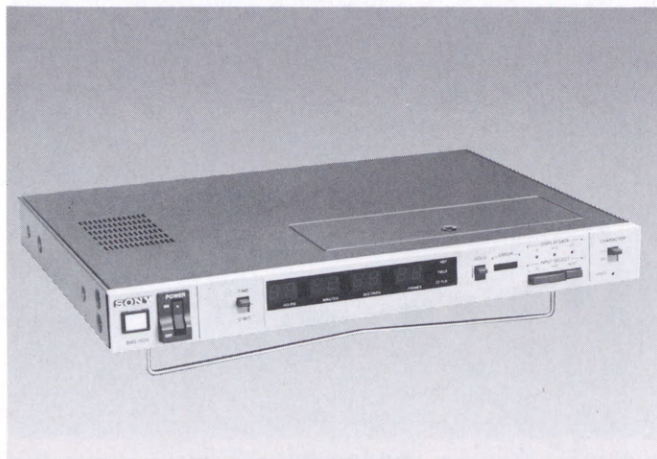


TIME CODE GENERATORS/READERS

Time Code Reader

BVG-1500/1500PS

(NTSC) (PAL/SECAM)



- Readout capability of LTC/VITC and user bits
- Built-in character generator
- 8-digit LED display/display hold
- Waveform processing function (LTC)
- Various mode indication
- Frame suppress function
- Compact and lightweight
- TTY interface capability with BKG-1501 (optional)

Supplied accessories

50-pin ribbon connector
6-pin connector
Rack mount metal kit
Labels for remote indicator
Operation and maintenance manual

Specifications

Power requirements: AC 100 to 120/220 to 240V $\pm 10\%$, 50/60Hz
Power consumption: Less than 20W
Operating temperature: 0°C to 40°C (32°F to 104°F)
Storage temperature: -20°C to 60°C (-4°F to 140°F)
Dimensions: 424(W) x 44(H) x 330mm(D) (16.7 x 1.7 x 13")
Weight: Approx. 4 kg (8 lb 13 oz)

Time Code Generator

BVG-1600/1600PS

(NTSC) (PAL/SECAM)



- LTC/VITC generator
- Hexadecimal user bits data setting
- Normal speed LTC reader function
- Slave/Extrapolation capability
- Time code color frame lock capability
- 8-digit LED display
- Various mode indications

Supplied accessories

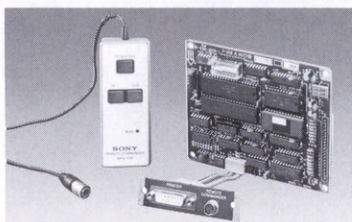
50-pin cable
50-pin ribbon connector
6-pin connector
Rack mount metal kit
Labels for remote indicator
Operation and maintenance manual

Specifications

Power requirements: AC 100 to 120/220 to 240V $\pm 10\%$, 50/60 Hz
Power consumption: Less than 20W
Operating temperature: 0°C to 40°C (32°F to 104°F)
Storage temperature: -20°C to 60°C (-4°F to 140°F)
Dimensions: 424(W) x 44(H) x 330mm(D) (16.7 x 1.7 x 13")
Weight: Approx. 4.5 kg (9 lb 15 oz)

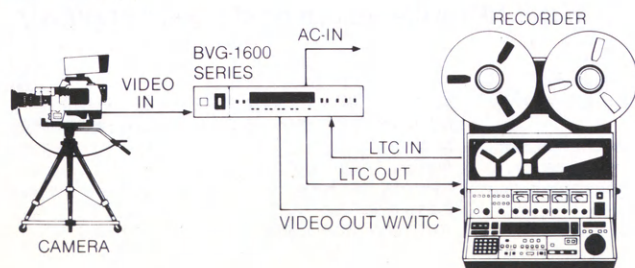
BKG-1501

Sony Printer Interface

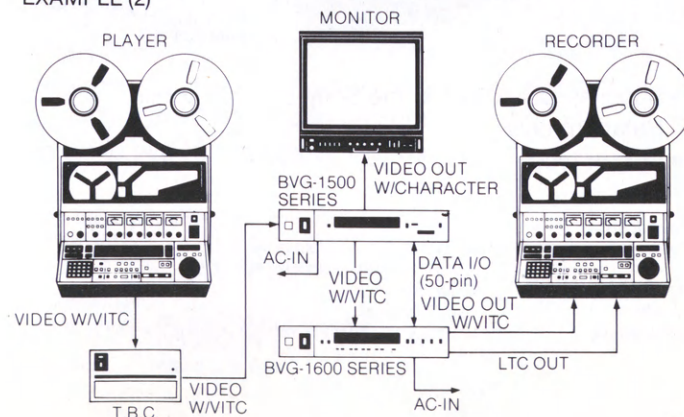


BVG-1500, 1600 SERIES TYPICAL CONNECTIONS

EXAMPLE (1)



EXAMPLE (2)



ACCESSORIES

AC Adaptor AC-500/500CE



- Supplies DC power to Sony BV-series equipment
- Genlock functions by means of a VBS signal

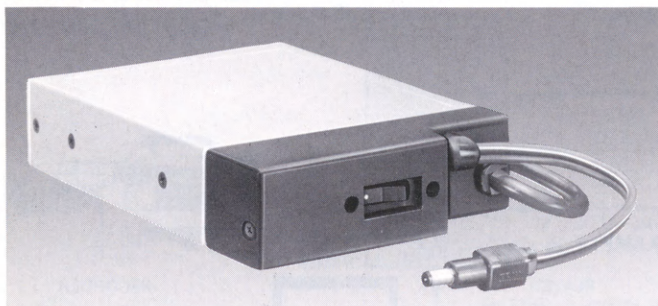
Supplied accessories

AC power cord
DC cord 2m (1-551-258-00) with XLR-4P

Specifications

Power requirements: AC 100/120/220/240V adjustable, 50/60Hz
Power consumption: 120W max.
Input/output terminals: CAMERA connector (14-pin)
VIDEO OUT connector (BNC type)
NTSC 1Vp-p, 75 ohms
MIC OUT connector (equivalent to XLR-3-31)
Reference output: -60dBm
600 ohms, balanced
DC OUT connector (equivalent to XLR-4-31) +12.3V, 7A
EXT VBS input connector (BNC type)
VBS (1Vp-p) or BS, 75 ohms
Weight: 4.3 kg (9 lb 8 oz)
Dimensions: 217(W) × 91(H) × 327mm(D) (8.5 × 3.6 × 12.9")

AC Adaptor for BVW-21/21P AC-21/21CE

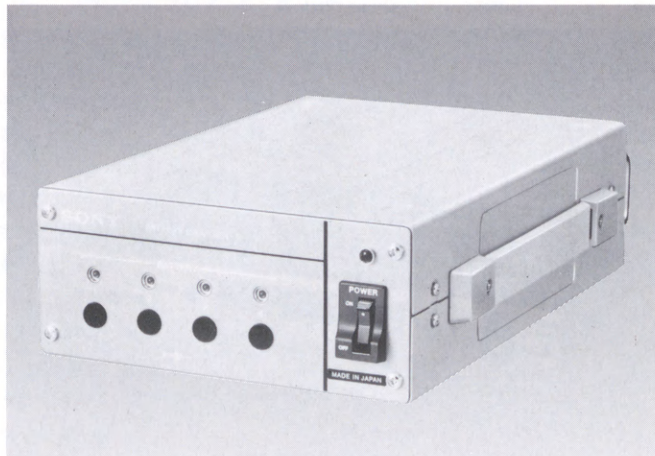


- Supplies DC power to the Sony BVW-21 series Betacam only
- Plug-in type

Specifications

Power requirements: AC 100 to 220V, 50/60Hz (AC-21)
AC 220 to 240V, 50/60Hz (AC-21CE)
Power consumption: 120W max.
Weight: 1 kg (2 lb 3 oz)
Dimensions: 123(W) × 169.5(H) × 37mm(D) (4.8 × 6.7 × 1.5")

Battery Charger for BP-90 BC-210/210CE



- Battery charger for BP-90 battery packs
- Up to four BP-90 batteries

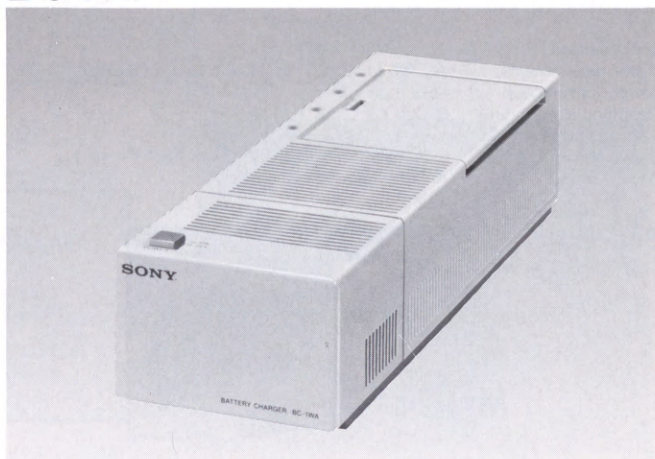
Supplied accessory

AC power cord

Specifications

Power requirements: AC 100/120/220/240V adjustable 50/60Hz
Power consumption: 70W
Output terminals: BATTERY jacks (for charging × 4)
2.0A (typical)
Charging time: Approx. 2 hrs per BP-90
Weight: 5.2 kg (11 lb 7 oz)
Dimensions: 217(W) × 91(H) × 320mm(D) (8.5 × 3.6 × 12.4")

Battery Charger for NP-1 BC-1WA

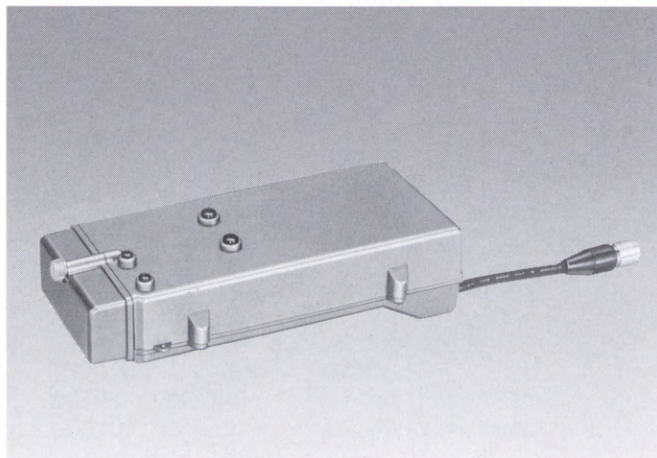


- The BC-1WA is a battery charger for the NP-1 battery pack used in the Betacam
- Up to four NP-1 batteries can be charged sequentially

Specifications

Power requirements: AC 120V ±10%, 50/60Hz (for USA and Canada)
AC 220 to 240V ±10%, 50/60Hz (for Europe and UK)
Power consumption: 58W
Charging time: Approx. 1 hr (max. 2 hrs)
Rechargeable battery: NP-1 only (per NP-1)
Weight: 2.4 kg (5 lb 5 oz)
Dimensions: 107.5(W) × 80(H) × 262mm(D) (4.2 × 3.1 × 10.3")

Battery Case for NP-1 DC-100



- Battery case for one NP-1 battery
- Specially designed for the BVV-1A Betacam recorder

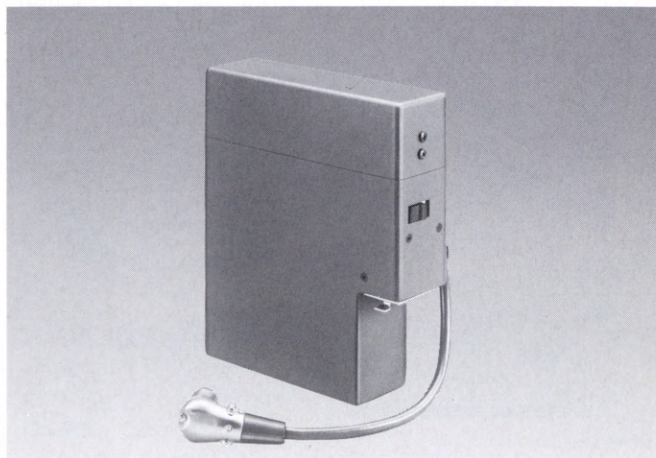
Supplied accessories

Metal fitting × 2
Screw (B 3 × 6) × 2
Screw (B 4 × 6) × 2
Lace

Specifications

Dimensions: 84.5(W) × 204.2(H) × 51mm(D) (3.3 × 8 × 2")
Weight: 295 g (10 oz)

Battery Case for BP-90 DC-300



- BP-90 battery case (one BP-90) for BVP-250, 300A, 330/330A series cameras and CA-3/CA-30/CA-300 equipped cameras

Specifications

Dimensions: 163(W) × 185(H) × 47mm(D)
(6.4 × 7.3 × 1.9")
Weight: 540 g (1 lb 3 oz)

Battery Case for BP-90 DC-210



- Battery case for one BP-90 battery pack
- Supplies DC 12V to Sony video equipment

Supplied accessories

Power cord (1.2m) × 1
Belt

Specifications

Dimensions: 145(W) × 180(H) × 85mm(D)
(5.7 × 7 × 3.3")
Weight: 500 g (1 lb 2 oz)

Battery Case for NP-1 DC-310



- Battery case for BVP series 3-tube cameras and CA-3/CA-30/CA-300 equipped cameras
- Up to two NP-1 batteries can be carried

Supplied accessories

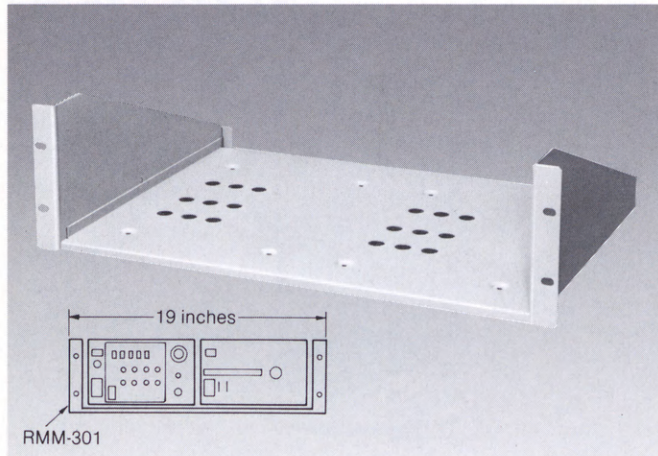
Holder × 1
Screws × 1 set

Specifications

Dimensions: 86(W) × 203(H) × 77mm(D)
(3.5 × 8 × 3.1")
Weight: 630 g (1 lb 6 oz)

ACCESSORIES

Rack Mount Adaptor RMM-301

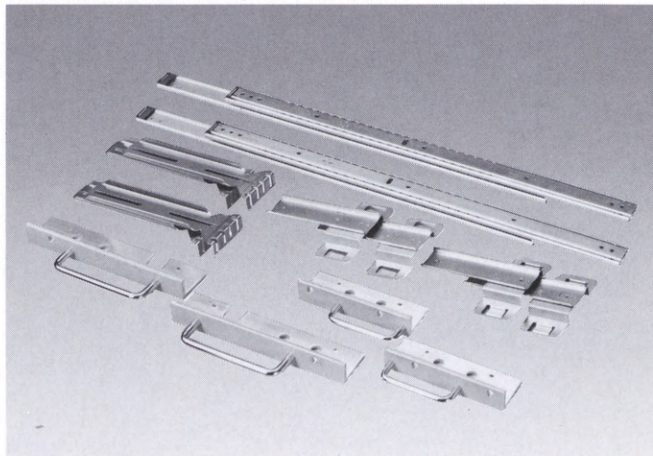


- The DCU-300 CCU adaptor and the CCU-300 can be rack mounted side by side in a standard EIA rack

Specifications

Dimensions: 482(W) × 132(H) × 330mm(D)
(19 × 5.2 × 13")
Weight: 4.7 kg (10 lb 6 oz)

Rack Mount Kit RMM-100



- The BVW-10 can be rack mounted on a standard 19-inch rack or system console

Rechargeable Battery Pack BP-90



Specifications

Type of battery: NiCd Rechargeable
Voltage: 12V
Current capacity: 3.5Ahr
Dimensions: 123(W) × 171(H) × 37mm(D) (4.8 × 6.9 × 1.5")
Weight: 1.7 kg (3 lb 12 oz)

Rechargeable Battery Pack NP-1



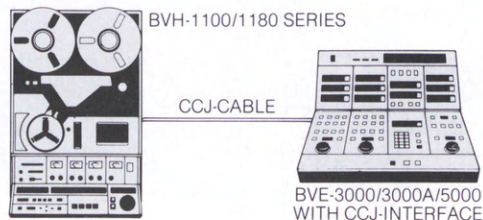
Specifications

Type of battery: NiCd Rechargeable
Voltage: 12V
Current capacity: 1.5 Ahr
Dimensions: 72(W) × 25(H) × 185mm(D) (2.8 × 1 × 7.3")
Weight: 680 g (1 lb 8 oz)

CCJ Cables

10-pin—10-pin Remote Cable for BVH-1100A/1180

CCJ-5: 5m (16ft) CCJ-10: 10m (33ft)



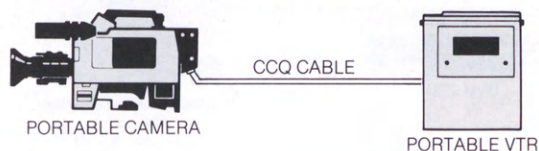
CCQ Cables

14-pin—14-pin Cable for Portable VTR and CAMERA

CCQ-2AR: 2m (6.4ft)

CCQ-5AR: 5m (16ft)

CCQ-10AR: 10m (33ft)

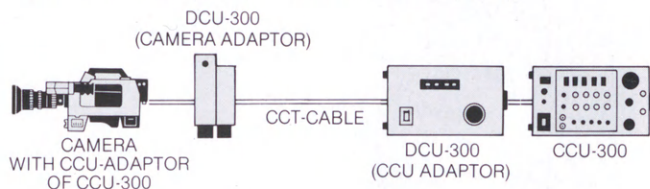


CCT Cables

Triax Cable for DCU-300

CCT-50: 50m (164ft) CCT-150: 150m (492ft)

CCT-100: 100m (328ft) CCT-300: 300m (984ft)



CCW Cables

41-pin—41-pin Cable for CCU-300

CCW-25: 25m (82ft)

CCW-50: 50m (164ft)

CCW-100: 100m (328ft)

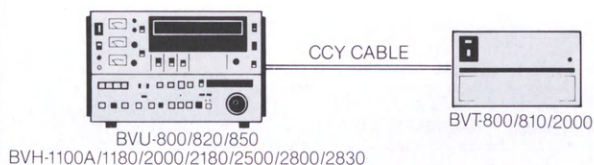


CCY Cable

18-pin—18-pin Cable for BVT-2000, BVT-800

CCY-3: 3m (10ft)

(supplied with BVT-2000, BVT-800)

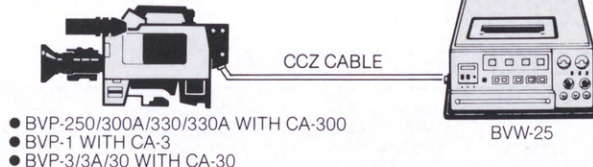


CCZ Cables

26-pin—26-pin Cable for VA-1/1V or BVW-25 and CA-3/30/300

CCZ-2: 2m (6.4ft)

CCZ-10: 10m (33ft)

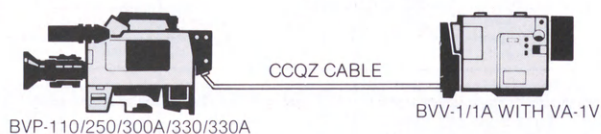


CCQZ Cables

14-pin (F)—26-pin (M) Cable for 14-pin equipped camera and BVV-1/1A with VA-1/1V.

CCQZ-2V: 2m (6.4ft)

CCQZ-10V: 10m (33ft)

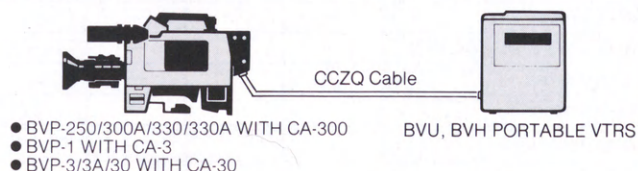


CCZQ Cables

26-pin (F)—14-pin (M) Cable for CA-3/30/300 and U-matic, 1-inch Portable VTR

CCZQ-2: 2m (6.4ft)

CCZQ-10: 10m (33ft)

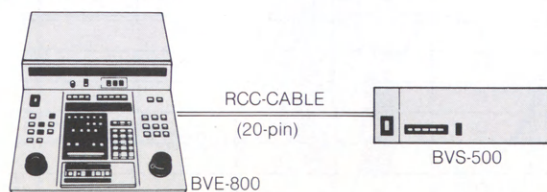


RCC-C Cables

20-pin—20-pin Remote Cable for BVS-500

RCC-5C: 5m (16ft)

RCC-10C: 10m (33ft)



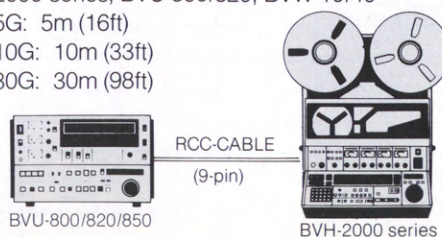
RCC-G Cables

9-pin—9-pin, RS-422 Remote Control Cable for BVH-2000 series, BVU-800/820, BVW-10/40

RCC-5G: 5m (16ft)

RCC-10G: 10m (33ft)

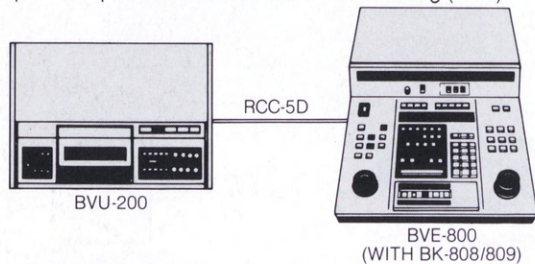
RCC-30G: 30m (98ft)



ACCESSORIES

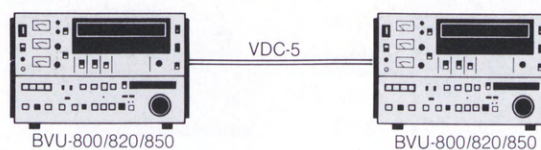
RCC-5D

36-pin—36-pin Remote Control Cable 5m long (16 ft)



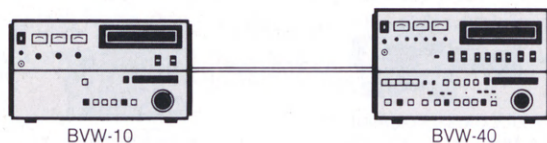
VDC-5

7-pin—7-pin RF Dubbing Cable for BVU-800/820, BVW-10/40
5m long (16ft)



12-PIN DUBBING Cable (Parts #1-557-413-11)

12-pin—12-pin Dubbing Cable (supplied with BVW-40)
5m long (16 ft)



* For more information, please refer to the service manual "Connecting Cable Manual". (#9-966-624-02)

CABLE REFERENCE CHART

	CCJ Cables	CCQ Cables	CCT Cables	CCW Cables	CCY Cables	CCZ Cables	CCQZ Cables	CCZQ Cables	RCC-C Cables	RCC-G Cables	VDC-5
BVH-1100A/1180 series	○	—	—	—	○	—	—	—	—	—	—
BVH-2000 series	—	—	—	—	○	—	—	—	—	○	—
BVH-500A series	—	○	—	—	—	—	—	○	—	—	—
DTR-2000	○	—	—	—	—	—	—	—	—	○	—
BVU-50/110/150 series	—	○	—	—	—	—	—	○	—	—	—
BVU-800/820/850 series	—	—	—	—	○	—	—	—	—	○	○
BVW-10/15/40 series	—	—	—	—	—	—	—	—	—	○	○
BVP-110 series	—	○	—	—	—	—	○	—	—	—	—
BVP-250/300A/330/330A series	—	○	—	—	—	—	○	—	—	—	—
CCU-300 series	—	—	—	○	—	—	—	—	—	—	—
DCU-300 series	—	—	○	○	—	—	—	—	—	—	—
BVT-800/810 series	—	—	—	—	○	—	—	—	—	—	—
BVT-2000 series	—	—	—	—	○	—	—	—	—	—	—
BVS-500	—	—	—	—	—	—	—	—	○	—	○
BVE-800	—	—	—	—	—	—	—	—	○	○	—
BVE-900	—	—	—	—	—	—	—	—	—	○	—
BVE-3000/3000A series	○	—	—	—	—	—	—	—	—	○	—
BVE-5000 series	○	—	—	—	—	—	—	—	—	○	—
BVG-100 series	—	○	—	—	—	—	—	—	—	—	—
BVV-1/1A series with VA-1, 1V	—	—	—	—	—	○	○	—	—	—	—
BVP-1 series with CA-3	—	—	—	—	—	○	—	○	—	—	—
BVP-3/3A/30 series with CA-30	—	—	—	—	—	○	—	○	—	—	—
BVP-250/300A/330A with CA-300	—	—	—	—	—	○	—	○	—	—	—
BVP-150	—	—	—	—	—	○	—	○	—	—	—

V-16 SERIES 1-INCH VIDEO TAPES

* For more information, please refer to the "Sony Broadcasting Video Tape" brochure.



V-16-18B/34B/66B/96B

(V-16 Tape in Carton Case)

Model	Reel size (inches)	Length m (feet)	Playing time (min.)		Weight* kg (lb)
			NTSC	PAL/SECAM	
V-16-18B	8	265 (869)	18	18	1.1 (2.4)
V-16-34B	8	500 (1,640)	34	34	1.4 (3.1)
V-16-66B	9	970 (3,182)	66	67	2.0 (4.4)
V-16-96B	10 1/2	1,410 (4,626)	96	98	2.7 (6.0)

* with case

All products available in US/Canada market only



V-16-18A/34A/64A/96A/126A

(V-16 Tape in Carrying Case)

Model	Reel size (inches)	Length m (feet)	Playing time (min.)		Weight* kg (lb)
			NTSC	PAL/SECAM	
V-16-18A	8	265 (869)	18	18	1.6 (3.5)
V-16-34A	8	500 (1,640)	34	34	1.9 (4.2)
V-16-64A	9	940 (3,084)	64	65	2.5 (5.5)
V-16-96A	10 1/2	1,410 (4,626)	96	98	3.3 (7.3)
V-16-126A	11 3/4	1,850 (6,069)	126	128	4.5 (9.9)

* with case

All products available in markets other than US/Canada



V-16-18SP/34SP/64SP/66SP/96SP/105SP/126SP/156SP/188SP

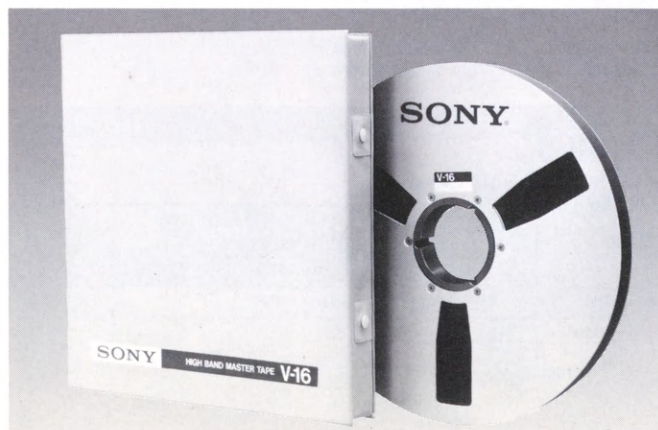
(V-16 Tape in Shipper Case)

Model	Reel size (inches)	Length m (feet)	Playing time (min.)		Weight*1 kg (lb)
			NTSC	PAL/SECAM	
V-16-18SP	8	265 (869)	18	18	2.0 (4.4)
V-16-34SP	8	500 (1,640)	34	34	2.3 (5.1)
V-16-64SP ²	9	940 (3,084)	64	65	2.9 (6.4)
V-16-66SP ³	9	970 (3,182)	44	67	2.9 (6.4)
V-16-96SP	10 1/2	1,410 (4,626)	96	98	3.7 (8.2)
V-16-105SP	10 1/2	1,540 (5,052)	105	107	3.8 (8.4)
V-16-126SP	11 3/4	1,850 (6,069)	126	128	5.3 (11.7)
V-16-156SP	12 1/2	2,290 (7,513)	156	158	5.8 (12.8)
V-16-188SP	14	2,755 (9,039)	188	191	6.6 (14.5)

*1 with shipper

*2 Not available in US/Canada market

*3 Available in US/Canada market only



V-16-126/156/188

(V-16 Tape in Soft Case)

Model	Reel size (inches)	Length m (feet)	Playing time (min.)		Weight*1 kg (lb)
			NTSC	PAL/SECAM	
V-16-126 ²	11 3/4	1,850 (6,069)	126	128	4.4 (9.7)
V-16-156 ²	12 1/2	2,290 (7,513)	156	158	4.9 (10.8)
V-16-188	14	2,755 (9,039)	188	191	6.0 (13.2)

*1 with case

*2 Not available in US/Canada market

V1-K SERIES 1-INCH VIDEO TAPES



V1-K-18B/34B/66B/96B

(V1-K Tape in Carton Case)

Model	Reel size (inches)	Length m (feet)	Playing time (min.)		Weight* kg (lb)
			NTSC	PAL/SECAM	
V1-K-18B	8	265 (869)	18	18	1.1 (2.4)
V1-K-34B	8	500 (1,640)	34	34	1.4 (3.1)
V1-K-66B	9	970 (3,182)	66	67	2.0 (4.4)
V1-K-96B	10 1/2	1,410 (4,626)	96	98	2.7 (6.0)

* with case

All products available in US/Canada market only



V1-K-18A/34A/64A/96A/105/126A/156A

(V1-K Tape in Carrying Case)

Model	Reel size (inches)	Length m (feet)	Playing time (min.)		Weight*1 kg (lb)
			NTSC	PAL/SECAM	
V1-K-18A*2	8	265 (869)	18	18	1.6 (3.5)
V1-K-34A*2	8	500 (1,640)	34	34	1.9 (4.2)
V1-K-64A*2	9	940 (3,084)	64	65	2.5 (5.5)
V1-K-96A*2	10 1/2	1,410 (4,626)	96	98	3.3 (7.3)
V1-K-105A*2	10 1/2	1,540 (5,052)	105	107	3.4 (7.5)
V1-K-126A	11 3/4	1,850 (6,069)	126	128	4.5 (9.9)
V1-K-156A*2	12 1/2	2,290 (7,513)	156	158	5.0 (11.0)

*1 with case

*2 Not available in US/Canada market



V1-K-18SP/34SP/64SP/66SP/96SP/105SP/126SP/156SP/188SP

(V1-K Tape in Shipper Case)

Model	Reel size (inches)	Length m (feet)	Playing time (min.)		Weight*1 kg (lb)
			NTSC	PAL/SECAM	
V1-K-18SP	8	265 (869)	18	18	2.0 (4.4)
V1-K-34SP	8	500 (1,640)	34	34	2.3 (5.1)
V1-K-64SP*2	9	940 (3,084)	64	65	2.9 (6.4)
V1-K-66SP*3	9	970 (3,182)	66	67	2.9 (6.4)
V1-K-96SP	10 1/2	1,410 (4,626)	96	98	3.7 (8.2)
V1-K-105SP*2	10 1/2	1,540 (5,052)	105	107	3.8 (8.4)
V1-K-126SP	11 3/4	1,850 (6,069)	126	128	5.3 (11.7)
V1-K-156SP	12 1/2	2,290 (7,513)	156	158	5.8 (12.8)
V1-K-188SP	14	2,755 (9,039)	188	191	6.6 (14.5)

*1 with case

*2 Not available in the US/Canada market

*3 Available in the US/Canada market only



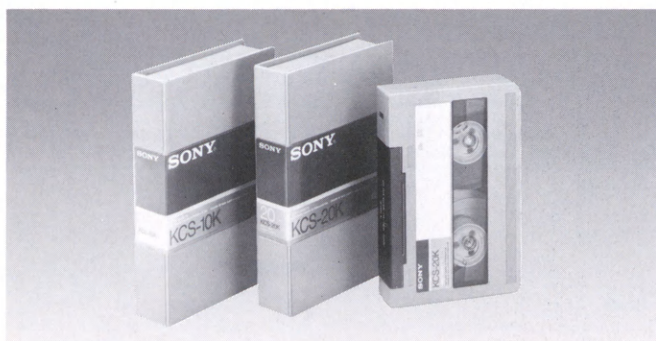
V1-K-188

(V1-K Tape in Soft Case)

Model	Reel size (inches)	Length m (feet)	Playing time (min.)		Weight* kg (lb)
			NTSC	PAL/SECAM	
V1-K-188	14	2,755 (9,039)	188	191	6.0 (13.2)

* with case

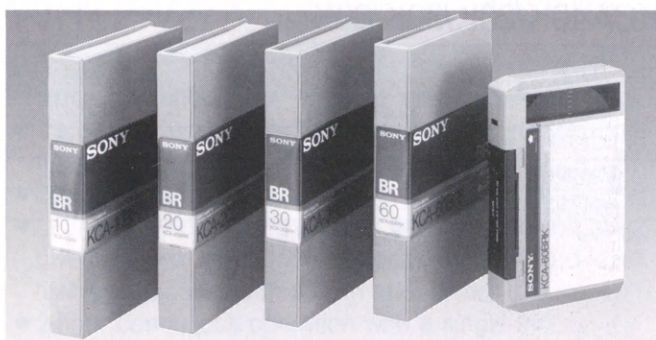
BRK SERIES U-matic TAPES AND BETACAM TAPES



KCS-10BRK/20BRK

Model	Tape length m (ft)	Playing time (min)	Weight* g (lb)
KCS-10BRK	72 (236)	10	475 (1.05)
KCS-20BRK	129 (423)	20	525 (1.16)

* with case



KCA-10BRK/20BRK/30BRK/60BRK

Model	Tape length m (ft)	Playing time (min)	Weight* g (lb)
KCA-10BRK	72 (236)	10	645 (1.42)
KCA-20BRK	129 (423)	20	695 (1.53)
KCA-30BRK	186 (610)	30	745 (1.64)
KCA-60BRK	358 (1174)	60	855 (1.88)

* with case



BCT-5K/10K/20K/30K

Model	Tape length m (ft)	Playing time (min)		Weight* g (lb)
		NTSC/PAL-M	PAL/SECAM	
BCT-5K	42 (137)	5	6	280 (0.62)
BCT-10K	75 (250)	10	12	300 (0.66)
BCT-20K	150 (500)	20	24	315 (0.70)
BCT-30K	222 (728)	30	36	340 (0.76)

* with case

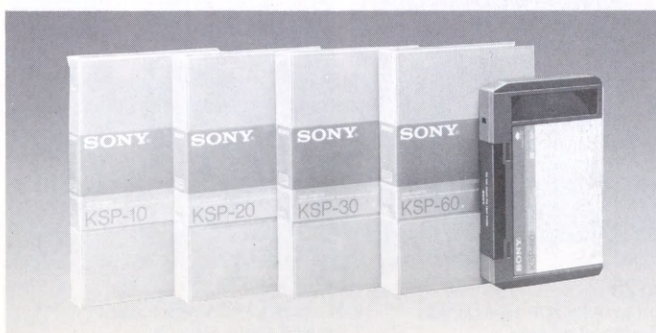
KSP SERIES U-matic TAPES



KSP-S10/S20

Model	Tape length m (ft)	Playing time (min)	Weight* g (lb)
KSP-S10	72 (236)	10	475 (1.05)
KSP-S20	129 (423)	20	525 (1.16)

* with case

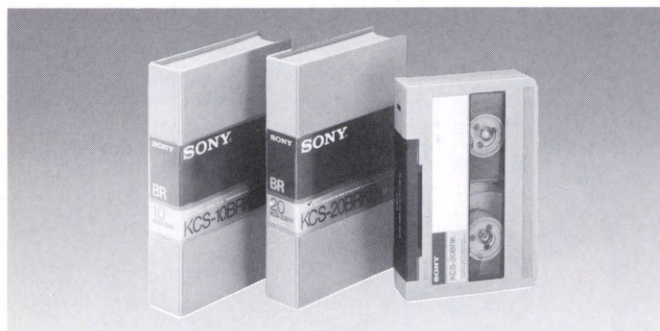


KSP-10/20/30/60

Model	Tape length m (ft)	Playing time (min)	Weight* g (lb)
KSP-10	72 (236)	10	645 (1.42)
KSP-20	129 (423)	20	695 (1.53)
KSP-30	186 (610)	30	745 (1.64)
KSP-60	358 (1174)	60	855 (1.88)

* with case

K SERIES U-matic TAPES



KCS-10K/20K

Model	Tape length m (ft)	Playing time (min)	Weight* g (lb)
KCS-10K	72 (236)	10	475 (1.05)
KCS-20K	129 (423)	20	525 (1.16)

* with case



KCA-10K/20K/30K/60K

Model	Tape length m (ft)	Playing time (min)	Weight* g (lb)
KCA-10K	72 (236)	10	645 (1.42)
KCA-20K	129 (423)	20	695 (1.53)
KCA-30K	186 (610)	30	745 (1.64)
KCA-60K	358 (1174)	60	855 (1.88)

* with case

TAPES OPTIONAL ACCESSORIES

FOR 1-INCH TAPES



9" metal reel 10" metal reel 11" metal reel
R1-9V / R1-10V / R1-11V
12" metal reel 14" metal reel
R1-12V / R1-14V



Flame retardant shipper
CL-16SP/16SPL



Carrying case
CL-16/16L

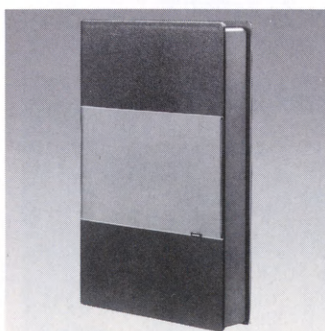
FOR U-matic AND BETACAM TAPES



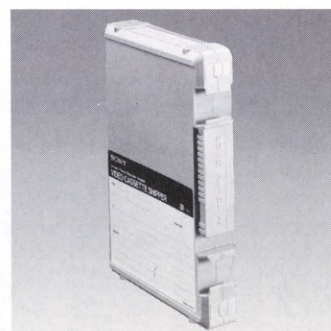
HG-5CL
Head cleaning videocassette tape for
Betacam recorder/player



KCS-1C
Head cleaning videocassette tape for
U-matic recorder/player



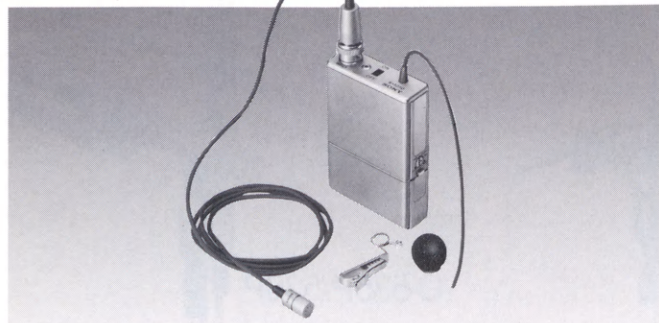
CL-25
Hard case for KCA type U-matic
videocassette tape



CL-25SP
Shipper for KCA type U-matic
videocassette tape

WIRELESS MICROPHONE SYSTEMS

* For more information, please refer to the "Sony Wireless Microphone Systems" brochure.



WRT-27/27A UHF Transmitter

- Crystal resonator provides stable operation that is virtually unaffected by ambient temperature variations
- Transmitter accepts dynamic, condenser, or any other type of microphone with a plug adaptor
- Suitable for inconspicuous use
- LED battery checker indicates battery condition and gives a signal when input exceeds the standard level (can be adjusted with built-in attenuator)
- 2-hour continuous operation with a single 9V transistor-radio type battery (Sony 006P)

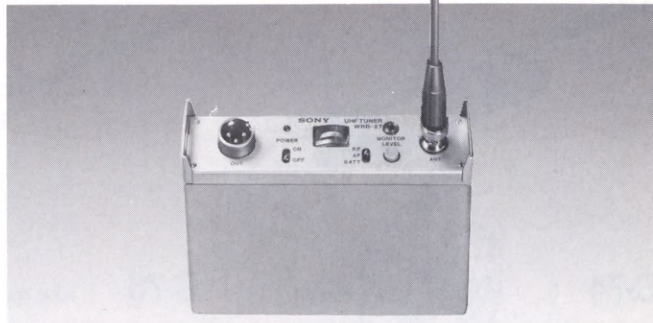
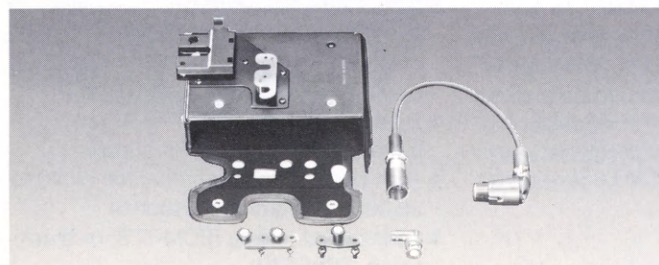
Dimensions: 59(W) × 93(H) × 20mm(D) (2.3 × 3.7 × 0.8")
Weight: 180 g (6.3 oz) without battery



WRT-57 UHF Wireless Microphone

- Wide dynamic range, thus providing greater linearity in frequency modulation
- Excellent sound quality due to incorporation back electret condenser microphone capsule
- Since UHF band requires only a 16cm (400MHz Band) antenna wire, greater signal emission efficiency is attained
- The shorter UHF band wireless microphone antenna looks neater on the TV screen and permits freer movement by performers

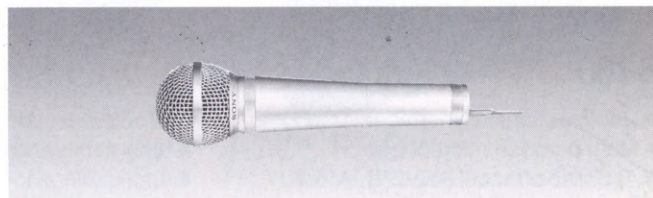
Dimensions: ø41 × 170mm(L) with wind screen (1.6 × 6.7")
Weight: 190 g (7 oz) with battery



WRR-27 UHF Tuner

- Compact antenna system for UHF band operation
- Bandpass filter including helical resonator in the RF-stage for excellent spurious rejection
- Approximately 5 hours of continuous operation on 6 Sony SUM-3S (AA size) batteries
- 3-mode meter indicating RF input level, audio output level, and battery condition
- Audio output monitoring through the supplied earphone
- Optional shoulder strap for handling convenience. The antenna can be attached to this strap

Dimensions: 148(W) × 116(H) × 35mm(D) (5.8 × 4.6 × 1.4")
Weight: 800 g (1 lb 12 oz) with batteries



WRT-67 UHF Wireless Microphone

- Uni-directional dynamic capsule especially suitable for vocal recording.
- Reactance RM system with a crystal oscillator provides outstanding frequency stability of $\pm 0.005\%$ and a dynamic range equivalent to that of wired microphones.
- 3-position (0dB/ - 10dB/ - 25dB) pad switch prevents overload distortion with high sound pressure level.
- Operation on a commonly available AA-size battery.
- Compact size and easy-to-hold tapered grip.

Dimensions: ø50.3 × 190mm(L) (ø2 × 7.5")
Weight: 340 g (12 oz) including battery

BTA-27 Tuner Attachment Kit

- Specially designed tuner attachment kit for the BVW-1/3/3A/30 Betacam unit
- A set of leatherette case and fittings for WRR-27 tuner

Dimensions: 133(W) × 166(H) × 60mm(D) (5.2 × 6.5 × 2.4")
Weight: 270 g (9.5 oz) case only

MICROPHONES AND AUDIO EQUIPMENT

* For more information, please refer to the "Sony Professional Microphones" brochure or to the "Sony Professional Audio General Catalog"



C-74

(Grip optional)

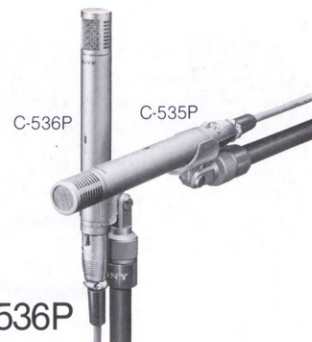
- Super uni-directional condenser microphone
- Suitable for ENG with portable video camera
- Optional microphone cables:
EC-0.5C2F (XLR-3-pin—XLR-3-pin)
EC-cables (XLR-3-pin—XLR-3-pin)
- Applicable stand: B-303B (with an optional grip GP-3)



C-76

(Grip optional)

- Super uni-directional condenser
- Suitable for studio microphone
- Optional microphone cables:
EC-cables (XLR-3-pin—XLR-3-pin)
- Applicable stand: B-303B (with an optional grip GP-3)



C-535P/536P

- Uni-directional condenser microphone designed specially for top-quality multi-microphone recording
- Sensitive to sound from the front (C-535P) or at a right angle to the microphone axis (C-536P)
- Operation external power supply
- Dimensions: $\varnothing 21 \times 154\text{mm}$
($\varnothing 27/32 \times 6 1/2$ ")
- Weight: C-535P 144 g (5.1 oz)
C-536P 148 g (5.2 oz)



F-760

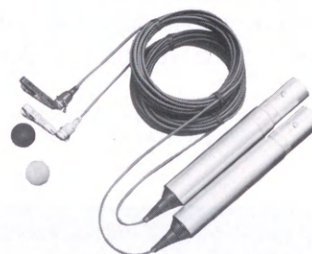
- Uni-directional Dynamic microphone
- Multi purpose microphone
- Applicable stand; A12/12N, A16/16N, B-303B/50, CRS-3P/3N



F-115

- Omni-directional dynamic microphone, all weather type
- With cable and plug*
- Applicable stand: A-12/12N, A-16/16N, B-303B/50, CRS-3P/3N

* XLR-3-11C for Europe
XLR-3-12C for General area



ECM-44S/44B

- Omni-directional electret condenser microphone
- Microphone head $\varnothing 8.5 \times 14.5\text{mm}$ ($\varnothing 9/16 \times 9/16$ ") and weighs only 2 g (0 oz)
- Satin-nickel plating (ECM-44S) or black finish (ECM-44B)



ECM-55S/55B

- Omni-directional electret condenser microphone
- Microphone head is $\varnothing 10.6 \times 21\text{mm}$ ($\varnothing 7/16 \times 13/16$ ") and weighs only 6.5 g (0.2 oz)
- Microphone cable with Cannon XLR-3-12C type connector
- Optional microphone cable:
EC-cables (XLR-3-pin—XLR-3-pin)



ECM-66S/66B

- Uni-directional back electret condenser microphone specially developed for musical instrument mixing
- Microphone head is $\varnothing 10.6 \times 24.2\text{mm}$ ($\varnothing 7/16 \times 31/32$ ") and weighs only 7 g (0.2 oz)
- 2-way powering system—AA-size battery or external power supply
- Satin-nickel plating (ECM-66S) or black finish (ECM-66B)



ECM-77S/77B

- Omni-directional electret condenser microphone
- Sony's smallest and lightest lavalier microphone, the microphone head is $\varnothing 5.6 \times 12.5\text{mm}$ ($\varnothing 7/32 \times 1/2$ ") and weighs only 1.5 g (0.05 oz)
- 2-way powering system—AA-size battery or external power supply
- High performance represented by 40 to 20,000Hz frequency response
- Satin-nickel plating (ECM-77S) or black finish (ECM-77B)



B-303B Boom Stand

Available screws PF 1/2", U 5/16"
NS 5/8" W 3/8" (adaptor)
Boom length 880mm
Stand height 910 - 1,480mm
Weight 4.8 kg (10 lb 9 oz)



B-50 Floor Stand

Available screws PF 1/2", U 5/16"
NS 5/8" W 3/8" (adaptor)
Pole length 930 - 1,540mm
Flexible pole length 390mm
Weight 4 kg (8 lb 13 oz)



CRS-3N Cradle Suspension

Available screw 5/8"-27 thread, grip 19—24mmø

CRS-3P

Available screw 1/2" pipe thread, grip 16—24mmø



EC-10XLR (10m)

Microphone Cable with XLR—3-pin Connectors



AC-148F AC Power Supply

Allows a condenser or electret condenser microphone to operate on an external power supply without additional connectors or cables.

System: 2-channel external power supply
Power requirements: AC 100 to 120/220 to 240V
Output voltage: DC 48V
Dimensions: 201(W) x 74(H) x 169mm(D)
(7.9 x 2.9 x 6.7")
Weight: 2 kg (4 lb 2 oz)



TC-D5 PRO Professional Stereo Cassette Deck

System: 4-track 2-channel stereo/mono
Power requirement: DC 3V (D size battery x 2)
Weight: 1.7 kg (3 lb 12 oz)
Dimensions: 237(W) x 48(H) x 168mm(D)
(9.3 x 1.9 x 6.6")



APR-2003

2-channel Portable Tape Recorder for ENG/EPF Applications

- Two audio tracks and center time code track for SMPTE/EBU time code
- Two tape speeds—19.05cm/sec and 9.5cm/sec
- Balanced microphone, line and time code inputs
- Reliable quartz locked direct drive mechanism

Tape and reel size: 6.25mm (1/4"), 5" reel
Tape speed: 19cm/s (7 1/2 ips) and 9.5cm/s (3 3/4 ips)
Frequency response: 19cm/s 30 - 15,000Hz ± 2dB
25 - 18,000Hz ± 3dB
9.5cm/s 30 - 10,000Hz ± 2dB

Power requirements: Power supply voltage: DC 10V - 14V
Current necessary: 2A
NP-1 rechargeable battery pack (optional) or AC operation with the addition of AC-500
AC adaptor (optional)
Dimensions: 335(W) x 140(H) x 300mm(D)
(13 1/4 x 5 5/8 x 11 7/8")
Weight: Approx. 6.7 kg (14 lb 13 oz) with NP-1

MICROPHONES AND AUDIO EQUIPMENT

* For more information, please refer to the "Sony Professional Microphones" brochure or to the "Sony Professional Audio General Catalog"



MX-P61VU

MX-P61VU/PK

12-channel Audio Mixer

12-channel Audio mixer

MX-P61VU: with VU meters

MX-P61PK: with peak program meters

Inputs: MIC (12-channels, Cannon XLR-3-31 type)
Reference level: -70dBs, -50dBs or -30dBs
Max. level: -40dBs, -20dBs or 0dBs
Impedance: 10k ohms, balanced
Circuit: Transformerless

LINE (12 channels, Cannon XLR-3-31 type)
Reference level: +4dBs
Max. level: +24dBs
Impedance: 10k ohms, balanced
Circuit: Transformerless

SUB (2 channels, Cannon XLR-3-31 type)
Reference level: +4dBs
Max. level: +24dBs
Impedance: 10k ohms, balanced
Circuit: Transformerless

MONITOR (2 channels, Cannon XLR-3-31 type)
Reference level: +4dBs
Max. level: +24dBs
Impedance: 10k ohms, balanced
Circuit: Transformerless

COMMUNICATE (1 channel, Cannon XLR-3-31 type)
Reference level: +4dBs
Max. level: +24dBs
Impedance: 10k ohms, balanced
Circuit: Transformerless

Outputs: LINE (4 channels, Cannon XLR-3-32 type)
Reference level: +4dBs, +6dBs or +8dBs at 600 ohms load
Max. level: +24dBs at 600 ohms load
Impedance: 150 ohms, balanced
Circuit: Transformerless

AUX (3 channels, Cannon XLR-3-32 type)
Reference level: +4dBs, +6dBs or +8dBs at 600 ohms load
Impedance: 150 ohms, unbalanced
Circuit: Transformerless

MONITOR (2 channels, Cannon XLR-3-32 type)
Reference level: 0dBs at 10k ohms load
Max. level: +20dBs at 10k ohms load
Impedance: 20 ohms, unbalanced
Circuit: Transformerless

PFL (1 channel, Cannon XLR-3-32 type)
Reference level: 0dBs at 10k ohms load
Max. level: +20dBs at 10k ohms load
Impedance: 20 ohms, unbalanced
Circuit: Transformerless

TB (1 channel, Cannon XLR-3-32 type)
Reference level: 0dBs at 10k ohms load
Max. level: +20dBs at 10k ohms load
Impedance: Less than 600 ohms, unbalanced
Circuit: Transformerless

PHONE (2 channels, phone jack)
Output: 30mW (max.) at 8 ohms load, unbalanced
Circuit: Transformerless

Power requirements: AC100 - 120V or AC220 - 240V selectable, 50/60Hz
External DC12V

Dimensions: 430(W) x 130(H) x 560mm(D)
(17 x 5 1/8 x 22 1/8")

Weight: 18.5 kg (40 lb 13 oz)



MX-P42 Portable Automatic Mixer

Compact microphone mixer with channel-wise ALC (Automatic Level Control) for maximum handling ease in the field)

Inputs: MIC (4-channels: -70dBs (-30dBs max.), -60dBs (-20dBs max.), -50dBs (-10dBs max.), or -40dBs (0dBs max.) selectable, low impedance, balanced, Cannon

LINE: -20dBs (0dBs max.) or +4dBs (+24dBs max.), 10k ohms, balanced, Cannon

MONITOR IN (2 channels): -20dBs ~ +10dBs, 7k ohms, unbalanced, SMC-type

Outputs: MAIN (2 channels): +4dBm (+20dBm max.), 600 ohms, balanced, Cannon

SUB (2 channels): -20dBm (-4dBm max.) or -64dBm (-48dBm max.), 600 ohms, balanced, Cannon

Power requirements: DC 9V (LR-14 x 6)
AC with AC adaptor

Dimensions: 295(W) x 70(H) x 200mm(D)
(11.6 x 2.8 x 7.9")

Weight: 3.9 kg (8 lb 10 oz) with batteries

PRODUCTS REFERENCE CHART

PRODUCT REFERENCE CHART

(As of April 1986)

MODEL	NTSC	PAL	SECAM	PAL-M	MODEL	NTSC	PAL	SECAM	PAL-M
BVW-105	○	○			BVE-5000	○	○		
BVW-15	○	○	○		BVE-3000A	○	○	○	
BVW-21	○	○			BVE-900	○	○		
BVW-25	○	○			BVE-800	○	○	○	○
BVW-1	○	○	○		BVT-2000	○	○	○	○
BVW-3A	○	○	○	○	BVT-810	○	○		
BVW-30	○	○	○	○	BVT-800			○	
BVV-1A	○	○	○	○	BKH-2150	○			
BVW-10	○	○	○	○	BKH-2100	○			
BVW-20	○	○	○		BKH-2350		○	○	
BVW-40	○	○	○		BKH-2300		○	○	
BVH-2800	○				BKH-2450				○
BVH-2830	○				BKH-2400				○
BVH-2500	○	○			BVG-100	○	○	○	○
BVH-2000	○	○	○	○	BVG-1500	○	○	○	
BVH-2180	○	○	○	○	BVG-1600	○	○	○	
BVH-500A	○	○	○	○	BVF-7000Q	○	○	○	
BVU-850	○	○			BVF-50	○	○	○	○
BVU-820	○	○	○	○	BVF-70	○	○	○	○
BVU-800	○	○	○	○	CCU-300	○	○	○	○
BVU-150	○	○			DCU-300	○	○	○	○
BVU-110	○	○	○	○	BVX-30	○			○
BVU-50	○	○	○		DTR-2000	○	○	○	○
BVP-360	○	○			FTR-100	○	○	○	○
BVP-330A	○	○	○	○	Super Motion Video System	○			
BVP-30	○	○	○	○					
BVP-3A	○	○	○	○					
BVP-150	○	○							
BVP-1	○	○	○						
BVM-1900A	○								
BVM-2000A		○	○	○					
BVM-1201	○								
BVM-1301		○	○	○					
BVM-1310	○								
BVM-8021	○								
BVM-9021		○	○	○					
BVM-9221		○	○						

$$\begin{array}{r}
 750 \\
 420 \\
 \hline
 1170 \\
 650 \\
 135 \\
 \hline
 785
 \end{array}$$

$$\begin{array}{r}
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 780 \\
 \hline
 1950 \\
 750 - 2^{th} \\
 \hline
 2700
 \end{array}$$

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